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VOLUME X OCTOBER 1917 NUMBER 10

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Journal of The Southern Medical Association

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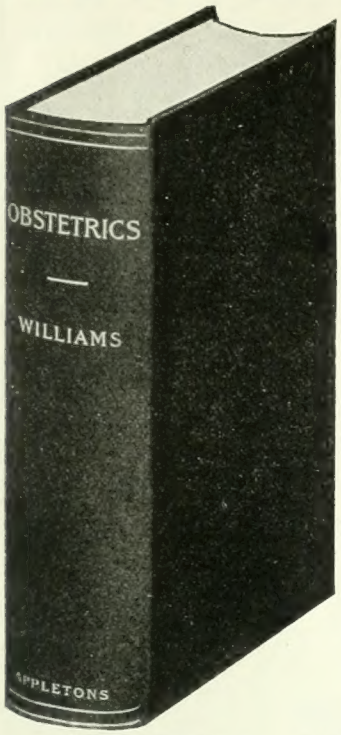

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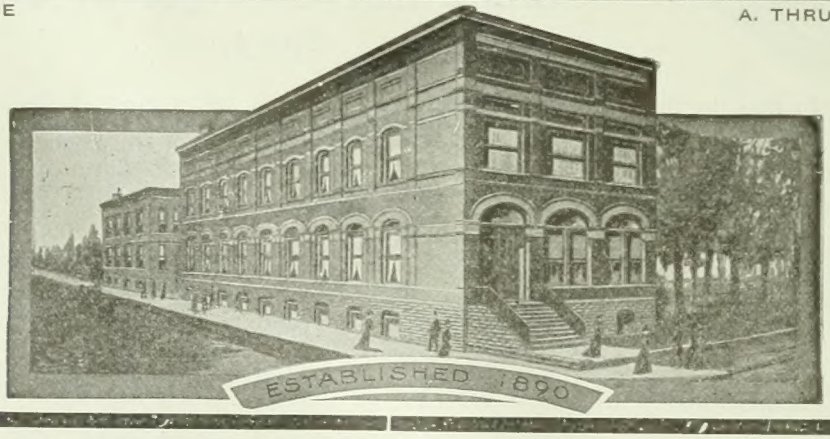

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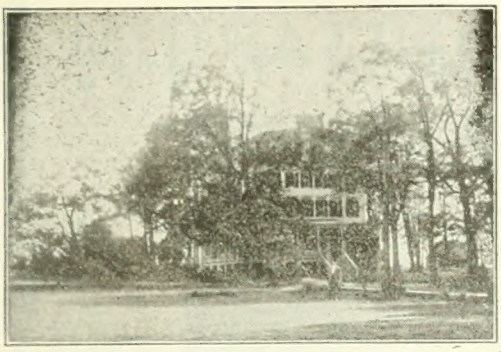

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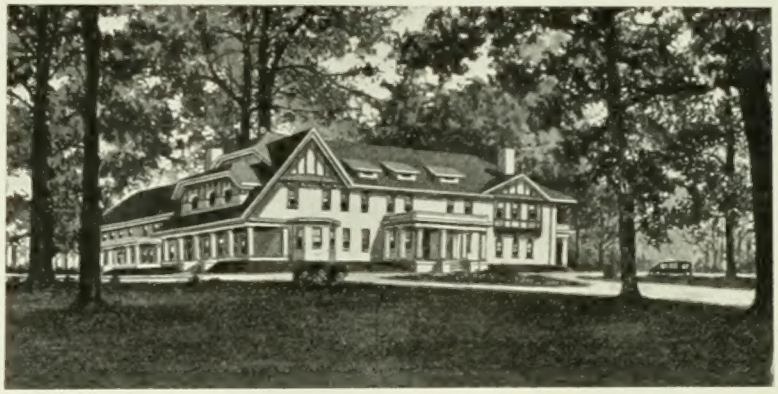

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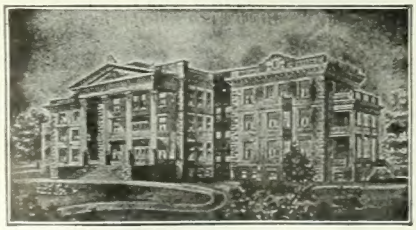

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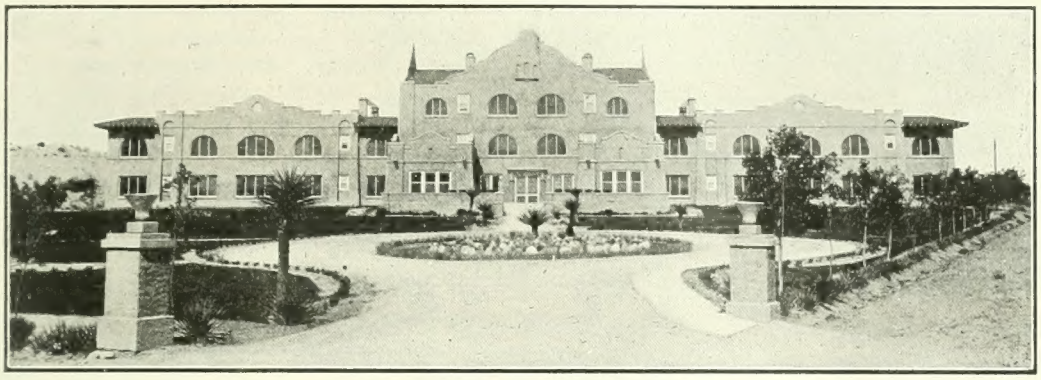

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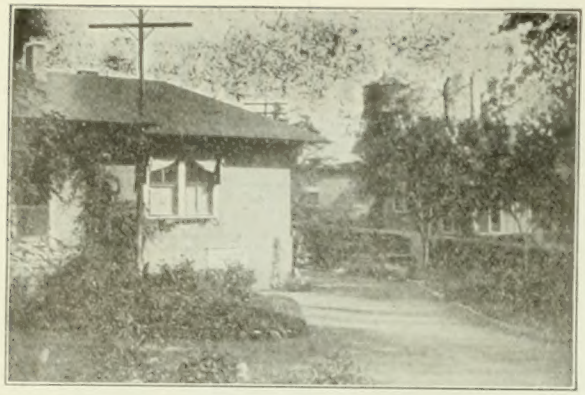

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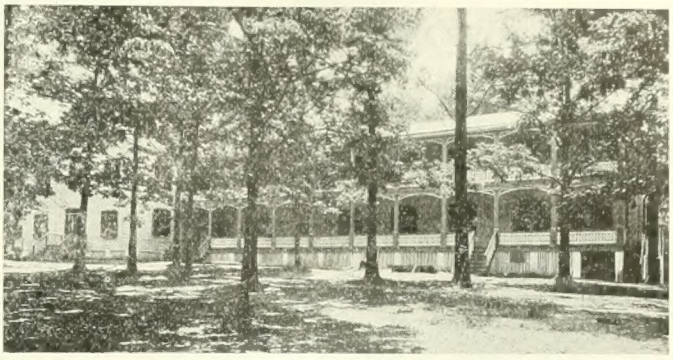

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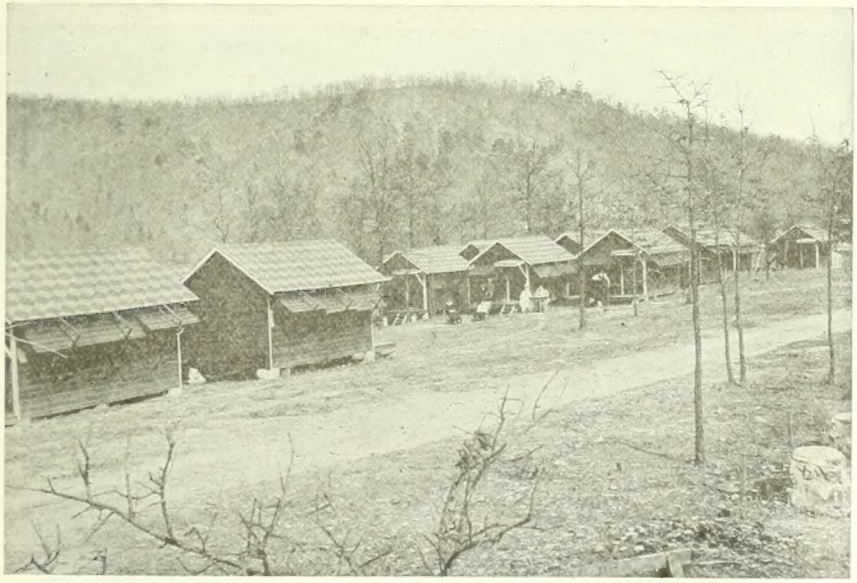

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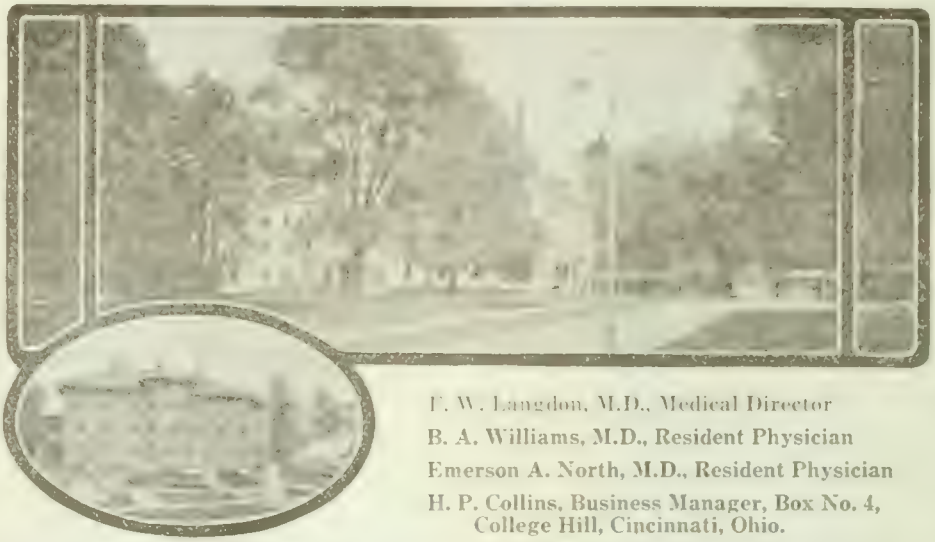

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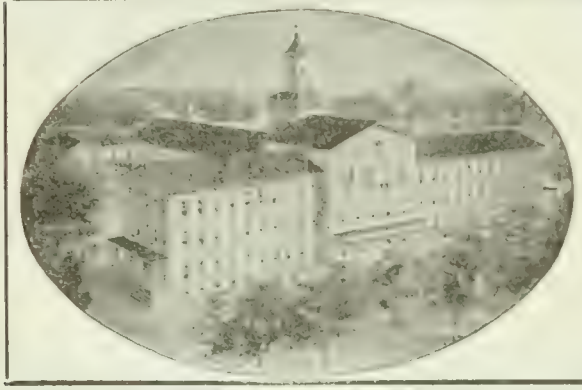

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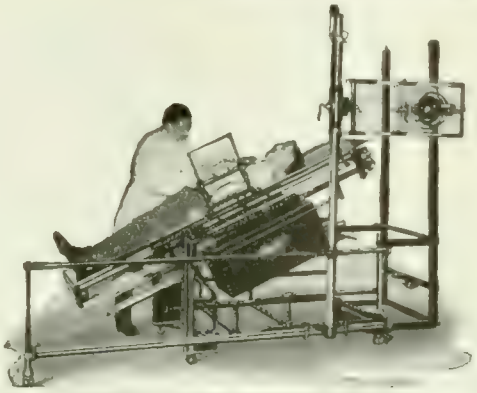

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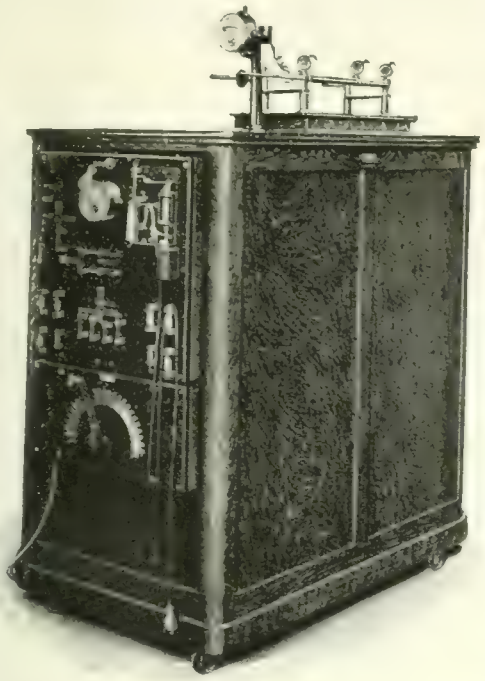

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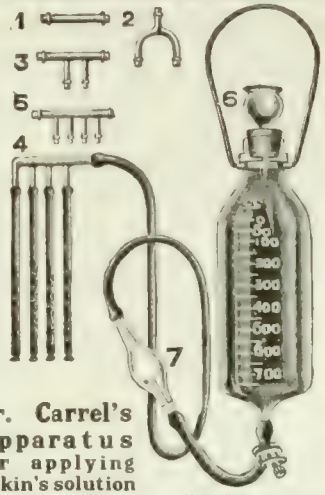

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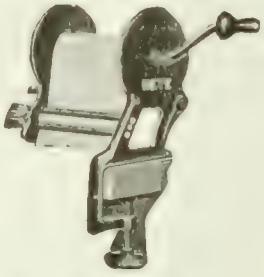

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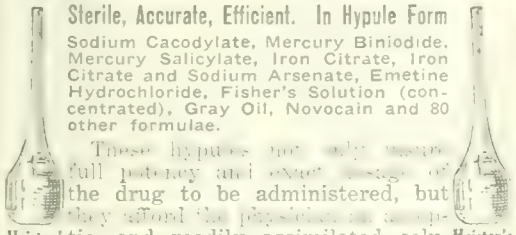

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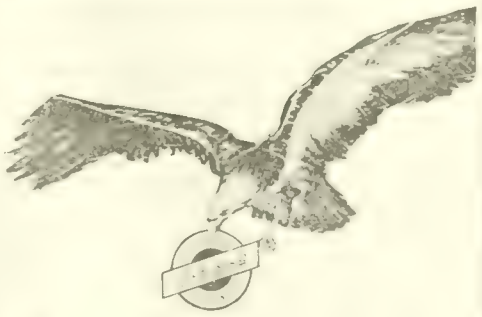

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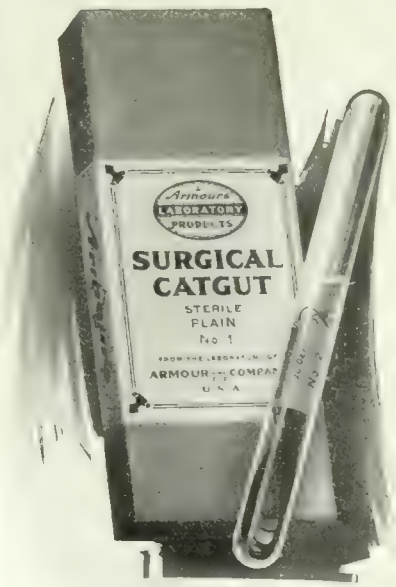

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MEDICINE

(INTERNAL DISEASES, PEDIATRICS, NEUROLOGY, DIAGNOSTIC METHODS, ETC.)

THE TREATMENT OF TABES

By Lewis M. Gaines, M.D.,
Professor of Clinical Neurology, Medical Department, Emory University, Atlanta, Ga.

HISTORICAL NOTE

The present conception of tabes represents a gradual evolution. A number of observers from 1816 to 1847 described cases, and called attention to such features as ataxia, blindness, swaying with eyes closed, and the gait. In 1851 Romberg gave a most precise description of the disease, but it was not until 1858 that a complete and adequate description was given by Duchenne.

Among a host of later observers who made prominent contributions to our knowledge may be mentioned Westphal (1875), Argyll-Robertson (1869), Marie, and Erb. More recently the serological features of the disease have been described by Wassermann, Plaut, and Noguchi.

If, as seems probable, syphilis was unknown in Europe before the discovery of America, the disease could hardly have existed there prior to the sixteenth century, and, as a matter of fact, we have no definite knowledge of its existence prior to one hundred years ago.

In tracing the historical development of tabes one is struck by the extraordinary multiplicity of symptoms and signs, and by the gradual correlation of these manifestations with the pathology. Only very recently have we arrived at a crystalized conception of the histopathology and pathogenesis of the disease.

RELATION OF EARLY DIAGNOSIS TO PROGNOSIS

The earlier observers diagnosed tabes from such striking symptoms as Romberg's sign, the distinctive gait, amaurosis, lost knee jerks and lightning pains. With the development of knowledge, however, we have recognized the disease earlier—before the occurrence of such gross symptoms. Indeed, we feel justified in diagnosing the disease now before the appearance of Romberg's sign, ataxia, or even disturbances of the deep reflexes. We realize, further, that it is precisely at such an early period in the development of the disease that we can favorably effect it by treatment. Schaller,[1] from a study of 150 cases of tabes, concluded that in a patient with a history or other evidences of syphilis presenting characteristic sensibility disturbances of the radicular type, with a tendency to symmetry, one should suspect a potential or early tabes. If, associated with the foregoing, we have a positive reaction in the cerebrospinal fluid, indicating a chronic syphilitic meningitis, together with such pupillary phenomena as anisocoria, pupillary irregularity or sluggish reaction to light, the diagnosis of early tabes is most probable Added to the foregoing symptoms, the loss of the Achilles tendon reflexes establishes the diagnosis of early tabes, even in the absence of those signs which we usually associate with tabes: Romberg's sign, marked sensibility loss, absent patellar reflexes, and Argyll-Robertson pupils. It is in such an early stage of the disease that the most successful treatment can be instituted.

IMPORTANCE OF TREATMENT

Experience has demonstrated that tabes is a progressive disease. Some cases re-

main quiescent for years, and then a sudden exacerbation of violent symptoms occurs (case 7). Other cases progress rapidly from the beginning, while others progress slowly and inexorably.

The hopeless attitude concerning results of treatment in the past was voiced by the pessimistic remark of Romberg[2] over fifty years ago: "For none of these patients is there hope of recovery; all are condemned to death."

Erb,[3] writing in 1910, concludes from an enormous personal experience with the disease, that it is incurable, though in a small proportion of cases recovery, or an arrest, which amounts to recovery, may be expected.

Since the experience of many years appears to demonstrate the hopelessness of the disease, the introduction of a new therapy in the form of intraspinal medication, during the past few years, has been watched with the greatest interest. A method of treatment to stay the ruthless advance of so devastating a malady, which has hitherto resisted all treatment, is obviously of great importance.

PRESENT METHODS OF TREATMENT

When Salvarsan was first introduced by Ehrlich in 1909, it was hoped that all diseases of syphilitic origin would yield to its intravenous administration. In a majority of cases, however, tabes proved resistant, though there were some encouraging reports. This failure of intravenous and other forms of syphilitic therapy stimulated a number of workers to devise methods which would introduce a spirocheticidal agent into closer contact with infected tissue. As a result, Swift and Ellis, in 1912, began the use of Salvarsanized serum, intraspinally, and in 1913 Ogilvie[4] undertook to prepare in vitro a serum of known Salvarsan content that could be safely administered intraspinally. In 1914, Ravaut injected Neosalvarsan directly into the spinal canal, and the same year Byrnes began the use of mercurialized serum.

These various methods are similiar in their objects, but in some of them (Ravaut's method and Byrnes' method) the reactions have appeared more severe, and the results no more encouraging than those obtained by the Swift-Ellis method. I, therefore, agree with Riggs and Hammes,[5] who say: "We have persisted in the Swift-Ellis procedure because there is less hazard in its use, and therapeutically it is as efficient as any."

In the preparation of the serum given to the series of cases reported below, the Swift-Ellis technic was followed except that the blood was withdrawn twenty to thirty minutes after the intravenous administration of Salvarsan. To my colleague, Dr. A. H. Bunce, of Atlanta, I am indebted for the skillful preparation of all the serum. In preparing the serum Dr. Bunce called my attention to the fact that milk in the diet a short time prior to the withdrawal of the blood not only caused the milky serum, but apparently caused more reaction. Since prohibiting milk for some hours previous to treatment, I have had much less severe reactions.

Regarding the dangers of intraspinal treatment, when a careful observance of technic is followed, the procedure has proven safe. Thus, Cotton[6] states that in the past three and one-half years approximately 3,000 such treatments have been given under his direction with no unfortunate results whatever. Ogilvie has found his method safe in more than 1,800 treatments, and Riggs and Hammes[7] in over 600 injections of Salvarsanized serum by the Swift-Ellis method, and have seen no serious ill effects.

In all of the injections which I have given, including those administered to the cases reported below, no ill effects have been observed.

REPORT OF CASES

Case I.—A man 38 years of age, who was first seen on May 25, 1914, had syphilis in 1890. He took mixed treatment for two years. In 1911, lancinating pains appeared in the legs at intervals of two or three months, and about the same time a feeling of heaviness in the legs. In 1912, slight incontinence of urine appeared. For the past year there has been increasing unsteadiness in walking, and during the past few months walking in the dark has been impossible.

Examination showed positive Romberg, Argyll-Robertson pupils with the left pupil larger than the right, both dilated and both irregular in contour, absent knee and ankle reflexes, and dulling of sensation below the knees. The patient had been given intravenous and intramuscular Salvarsan with no improvement. The spinal fluid showed a 4-plus positive Wassermann, 47 cells per cu. mm., and increase in globulins.

On June 12, 1914, he was given Salvarsanized serum by the Swift-Ellis method with a moderate reaction of leg pains. On September 6, 1914, a second similar treatment was given.

November 7, 1914: Very marked improvement clinically. The incontinence has ceased, the patient is walking steadily, and can even mount stairs in the dark without assistance, a thing previous to treatment impossible. He gained fifteen pounds in weight since beginning treatment.

The patient was lost sight of until September, 1916, when he came to say that he had had no trouble, was free from pain and was walking well, but would like further treatments as a prophylactic measure.

Case II.—A man 39 years of age, who was first seen October 8, 1914, had syphilis in 1903. He was given mixed treatment for one year. In 1907, lancinating pains in the legs made their appearance and were diagnosed "rheumatism." They gradually increased in frequency and severity. For the past year they have been especially severe. In March, 1914, difficulty in walking first appeared, and has rapidly grown worse, so that when first seen the patient required great dependence on his cane. Incontinence of bladder and rectum has been present since May, 1914, as well as paraesthesias in the lower limbs.

Examination showed positive Romberg (extreme), Argyll-Robertson pupils and absent knee and ankle reflexes. The blood showed a 3-plus positive Wassermann, the spinal fluid showed a 4-plus positive Wassermann, 15 cells to the cu. mm., and no increase in globulin.

On October 10, 1914, Salvarsanized serum by the Swift-Ellis method was given, with fairly severe leg pains following.

On November 1, 1914, a second similar treatment was given. The spinal fluid findings were precisely the same as on the first examination.

On November 22, 1914, a third similar treatment. The spinal fluid Wassermann was still 4-plus positive, the cells 10 per cu. mm., and no increase in globulin.

On December 5, 1914 the patient was walking, stumbled and fell, sustaining an intracapsular fracture of the right femur, which healed after two months. The patient abandoned further intraspinal treatment, though the pains were greatly relieved. There was no improvement in the ataxia or incontinence, and when last heard from in July, 1915, he was definitely in the paralytic stage.

Case III.—A man 46 years of age, who was first seen August 5, 1915, had syphilis in 1888, and no treatment. In December, 1913, the patient became unconscious for a few moments. This attack was followed by great physical prostration so that he remained in bed five months sugering from weakness, but no paralysis. He was treated at Hot Springs, Ark., for six weeks and then resumed his occupation of locomotive engineer. He was fairly well until July 20, 1915, when he noticed lancinating pains in the legs, which have continued ever since. At the same time he noticed a growing unsteadiness in walking, especially in the dark. For several months there has been a dribbling of urine. For three or four years he has noticed a diminution of sexual power.

Examination showed the right pupil larger than the left, both immobile to light, and only the right reacting slightly during accommodation. Romberg positive. Right knee jerk absent, left knee jerk present, but much diminished. Both ankle jerks present. The spinal fluid showed a 4-plus positive Wassermann, 12 cells per cu. mm., and increased globulin content. On August 21, 1915, Salvarsanized serum was given intraspinally and again on December 5, 1915, when the spinal fluid findings were the same as at first except the cells were 20 per cu. mm. On April 27, 1916, a third similar treatment was given, when the spinal fluid findings were Wassermann 4-plus, cells 12, and globulin content slightly increased. Though so little change was apparent in the spinal fluid, this patient improved remarkably. He regained complete control of his bladder, his pains all disappeared, and he stated there was no further unsteadiness of the legs. In fact, he has remained so well that he has declined further treatment up to the present time (December, 1916).

Case IV.—A man 43 years of age, who was first seen September 27, 1915, had syphilis in 1895, with treatment for two years. For one year there had been some leakage from the bladder. For two months there had been lancinating pains in both legs and some unsteadiness in walking in the dark.

Examination showed rigid miotic pupils, slight swaying on standing with the eyes closed, and absent knee and ankle reflexes. The spinal fluid showed 4-plus positive Wassermann, 18 cells per cu. mm., and an increase of globulin. Salvarsanized serum by the Swift-Ellis method was given. After the first dose improvement was marked, especially in regard to the pains.

On December 11, 1913, a second similar dose was given. At this time the spinal fluid showed 3-plus positive Wassermann, 13 cells per cu. mm., and slight increase in globulin.

On April 6, 1916, a third similar treatment, when the spinal fluid showed 4-plus positive Wassermann, 14 cells per cu. mm., and moderate increase in globulin content. At this time the patient felt entirely relieved of pains, difficulty in walking and incontinence. At the time of this writing (December, 1916), he has remained well and had no further treatments.

Case V.—A man, 43 years of age, who was first seen August 30, 1916, had syphilis in 1891. He was treated twenty-eight months by inunctions of mercury, potassium iodid and protiodid of mercury by mouth. He remained well until 1913, when he first noticed lancinating pains in the legs, diagnosed rheumatism. Shortly thereafter slight unsteadiness in walking developed. This has gradually increased until now he uses a cane, though he can walk without this aid. He has noticed various types of parasthesias in both legs, but no sexual weakness nor incontinence.

Examination showed positive Romberg (marked), pupils slightly dilated, both irregular in contour, do not react to light, react slowly to accommodation, knee jerks and ankle jerks both absent, marked dulling of sensation in lower extremities, especially to pain.

The blood Wassermann was negative, the spinal fluid Wassermann was 4-plus positive, using 0.5 c. c. and 0.7 c. c. of the fluid. Cell count was 71 per cu. mm. with a slight increase in globulin.

This patient was given no treatment except the Salvarsanized serum, the first dose being given on

September 11, the second dose on November 13, when the spinal fluid showed a 3-plus positive Wassermann with 0.7 c. c. of fluid, and a cell count of only 9 per cu. mm. The third dose was given on January 2 with 4-plus positive Wassermann and 0.7 c. c. of spinal fluid and 8 cells per cu. mm. Coincident with the marked serological improvement was a corresponding clinical improvement. The pains practically disappeared and the patient was able to walk very much better than he had done for a long time previously. He himself was very enthusiastic over his improvement. He is still under treatment, and so far there has been no aggravation of his previous symptoms.

Case VI.—A man 46 years of age was first seen February 22, 1916. He contracted syphilis in 1890. He had three years of intensive treatment, and in addition made five journeys to Hot Springs, Ark., at intervals of several years, each for additional treatment for fear that he had not been perfectly cured. Two Wassermann tests of his blood within the last few years have been negative.

For a year prior to the time of his first visit he had suffered at times with lancinating pains in his legs, and for two months with partial loss of memory. Examination showed normal knee reflexes, ankle jerks present but somewhat diminished, irregular pupils which reacted neither to light nor to accommodation. Romberg's sign was negative. There was no ataxia, no objective disturbances of sensation. Examination of the spinal fluid showed 4-plus positive Wassermann in all strengths and 25 cells per cu. mm. with a great increase in globulin. The blood showed 2-plus positive Wassermann.

Although there was no ataxia and the knee jerks were present, this case may be looked upon as a very early case of tabes.

This patient has been under treatment for one year, during which time he has received twelve intraspinal treatments by the Swift-Ellis method. His improvement has been very marked. The pains in the legs entirely disappeared. The disturbances in memory soon disappeared also, and he gained fifteen or twenty pounds in weight.

Under the influence of the treatment the Wassermann showed comparatively little change, varying from 2- to 4-plus positive, but the cell count showed a marked decrease after the first treatment, varying from 14 cells as a maximum to 5 cells as a minimum. Clinically, however, the results have been remarkably good in a patient who had tried every other means before resorting to this treatment, including the intravenous administration of Salvarsan.

Case VII.—A man, 49 years of age, was first seen on December 11, 1916. He had contracted syphilis in 1892 and had taken mixed treatment only for a few months. In 1905 the first symptom of the disease appeared in the form of lancinating pains in both legs of a very severe character. For ten years these pains constituted the only symptom. Three years ago he went from his home in New York City to Florida for a change. The change in climate brought no relief. Six months ago difficulty in walking and marked ataxia appeared. At the same time there developed incontinence in bladder and rectum, impotence and paraesthesias in both legs. He had taken six intravenous doses of Salvarsan with no relief.

Examination revealed an unusually vigorous man. During the course of the examination the patient showed evidences of extreme suffering from lancinating pains. Romberg's sign was very marked, the pupils were irregular in contour, equal in size, miotic and rigid to both light and accommodation, knee jerks and ankle jerks both absent, dulling of sensibility in both legs from hips down with especial dulling sensibility to pain.

Examination of the spinal fluid showed 4-plus positive Wassermann with cell count of 96 cells per cu. mm. and considerable increase in globulin.

This patient was given his first intraspinal treatment by the Swift-Ellis method on December 12, 1916. On December 29, 1916, he reported for his second treatment, stating that his pains were much relieved. Serological examination at this time showed no change in the Wassermann reaction nor in the globulin, and the cell count was 14 cells per cu. mm. Six weeks later the patient reported for his third treatment, stating that he had been practically free of pain, and felt generally better. This was the longest period of relief from pain for ten years, although he had tried every other known method short of morphine. He could detect no improvement in his walking nor in the symptoms of incontinence. The serological examination at this time showed practically the same as at the last examination. The cell count was 12 cells per cu. mm.

This case illustrates quiescent tabes over a period of many years with sudden appearance of the ataxia stage in a pronounced form. The results of treatment so far have been seen only in the relief of pain, indicating a subsidence of the radiculitis and meningeal inflammation. No doubt there has been such destruction of nerve tissue as to prohibit any marked improvement of the other symptoms such as ataxia and incontinence.

COMMENT AND CONCLUSIONS

From the few cases here reported, no trustworthy conclusions could be drawn. However, from the accumulated experience of many years, since the disease was first accurately described, it is reasonable to say that until the method of intraspinal therapy was introduced the prognosis in tabes was all but hopeless. Since the advent of this mode of treatment the outlook has been greatly brightened. One may now expect to obtain an arrest of tabes if treatment is instituted early. My own preference is for the Swift and Ellis method. By this method all the cases which I have treated have been benefited. The most one can say is that the method offers the best chances for arrest and improvement of any yet devised.

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THE IMPORTANCE OF TIME IN THE TREATMENT OF TUBERCULOSIS*

By William Redin Kirk, M.D.,
Hendersonville, N. C.

The importance of time in the treatment of tuberculosis is evident when we analyze the numerous factors relative to it; but it is only when we appreciate their significance and utilize them promptly that we may hope for the best results.

The day has passed most happily, we may say, when tuberculosis was looked upon as an incurable disease. We know now that the patient who has tuberculosis, while he can not expect a cure in the common acceptance of the term when applied to such diseases as typhoid fever, pneumonia or diphtheria, may look for a life of at least restricted usefulness, provided he can spend the necessary time while his disease is most active and he has the resistance to convert an acute into a chronic process. One of the chief difficulties in speaking of, or dealing with, tuberculosis in a general way, is the inclination to treat the disease as a clinical entity, when as a matter of fact no disease, not even excepting syphilis, is more protean in its manifestations; and any advice having for its object the proper disposition to be made of an individual case, should be given with due consideration of the stage and type of the disease.

Too little thought is given to this phase of the subject.

The incipient case will not invariably get well nor the advanced case die. Your moderately advanced case may live for years and your incipient case die in two or three months.

There are many factors which enter into the ultimate outcome and success in treatment which can not be based upon our understanding of the medical features alone. Social and economic equations must receive careful consideration as well.

After a diagnosis has been made the next most important question which has a bearing upon the length of time it takes to get well is, shall the patient stay at home or go away?

Lawrason Brown[1] says: "Treatment at home is less expensive, does not entail residence in a hotel or boarding house or acclimatization after return to work; precludes separation from family and friends, fatigue of travel, home-sickness; does not break up business arrangements in the same degree."

Now, there is a tendency among some of the profession to act upon such advice as this and they are encouraged by other authorities who sincerely believe in home treatment—and also by the patient himself, who is naturally disinclined to leave home and friends.

But my experience with treating patients in their own homes has not been satisfactory and I have found the reasons given by Brown for advising patients to stay at home are, many of them, the very reasons for which I would advise a change. One thing is certain, staying at home does not shorten the time that patients must employ in taking the cure. That they can get well at home in any climate and often under adverse conditions is a well known fact; but it will be admitted, I believe, by all unbiased men that a change of climate and environment has some beneficial effect over metabolic processes which we often see illustrated in those who have attempted to get well at home and who have steadily lost but who rapidly improve after a complete change of environment.

Most of those who have contracted the disease have done so by overwork, dissipation or unhygienic living, and to overcome these obstacles to recovery at home with

*Read in the Section on Medicine, Symposium on Tuberculosis, Southern Medical Association, Tenth Annual Meeting, Atlanta, Ga., Nov. 13-16, 1916.

temptation so close at hand is expecting more than should be expected of the average individual, and the physician who undertakes to manage a case under such conditions finds most often that his failure to obtain results is due, in no small measure, to his inability to make the patient live correctly. Time lost in these unsuccessful efforts is valuable time and adds not only to the sum total of wasted time, but often precludes the possibility of recovery. No physician should undertake the treatment of a case at home unless he is willing to devote sufficient time and attention to the many small details which the necessities of the case demand. It is not sufficient to say eat plenty of nourishing food, keep quiet and live in the open air, and then leave it to the patient to carry out these instructions as he sees fit or as it suits his temperament to do so. Important and helpful as these measures are, they may be harmful unless correctly applied and the patient should not only be instructed in the proper way to use them, but what is more important the physician should see himself that they are carried out as he directs. The difficulty is just here, for it is next to impossible for the sick one living with those who are well to carry out the doctor's orders. The well are living one way—the ill must live another and contrary way. Those who are well must so order their every-day lives that the invalid comes in for first consideration. This state of affairs is rare, for we seldom see so much unselfishness under one roof. The intrusion of meddlesome but well-meaning friends, the presence of solicitous and over-anxious relatives, the pressure of some unfinished work, business and household worries, these and many others contribute their quota to the endless number of little things which make system impossible and treatment ineffectual.

I have dwelt upon these factors because when they do interfere with and delay recovery their real importance in the matter of time is hard to exaggerate. Halfway methods, compromise and subterfuge have no place in the treatment of tuberculosis. Some one has wisely said that the patient must do the right thing, in the right way, at the right time, if he wishes to get well.

Were I to select a text for this paper I could do no better than quote the following aphorism of Hippocrates: "Life is short and the art long; the occasion fleeting; experience fallacious and judgment difficult. The physician must not only be prepared to do what is right himself, but also make the patient, the attendants, and the externals co-operate."

We are forced to conclude, then, that when it is possible to do so we are serving the best interests of our patient by sending him from home to a more favorable climate and suitable environment and placing him in competent medical hands.

When he has done this the physician has done what is right himself and he has taken the first step toward shortening the time necessary for cure, and as time, with its concomitant factor of expense, stands out in such clear relationship to recovery, nothing, no matter how trivial, must be overlooked which may save either.

The chronic nature of tuberculosis makes it an expensive disease to overcome and, as the majority of victims are in moderate circumstances and dependent upon their own efforts for support, time and money become the paramount issue and we are convinced from long observation both may be saved by giving the patient treatment away from home, provided he can afford as good or better service than he can command at home.

I believe in tuberculosis, as in medicine and surgery generally, that it is the very poor and the rich who get the best advice and receive the best treatment. The indigent are cared for in local sanitoria by skilled attendants without cost to themselves, and the rich may go where they please and obtain the best without thought of expense; but it is the large middle class who do not care to be a public charge and yet who can not afford to pay even the moderate charge of a private sanitorium, that give us the most concern. They furnish a real problem in resort towns, and municipalities, to protect themselves, have had to pass segregation and other laws which may seem harsh but are only just, if they are to entertain the sick at all in their midst. If these patients should only place themselves for guidance and advice under some physician who is conversant with local conditions, they would fare

much better, but they generally elect to manage their own cases. They are usually not far advanced and do not believe they are ill enough to go to an institution. Besides they do not want to be known as tuberculous and they do not care to associate with the sick.

When they can conceal the nature of their disease they go from boarding house to boarding house, sacrificing comfort and necessities to appearances, often doing without medical supervision to save expense until the disease is so far advanced they are forced to seek the sanitorium in a last effort to get well. By this time they have learned their lesson, but they have wasted time and money enough to have made a recovery had they employed both properly in the beginning. Some of the saddest chapters in the history of tuberculosis have been written by patients themselves who have made these mistakes.

If the profession at large were better acquainted with conditions in resort towns it would not be necessary to remind them that they could assist very materially by insisting upon their patients' having competent medical supervision whenever it was thought necessary for them to leave home for treatment.

Our hope lies in getting cases in the early stages and keeping them long enough to effect a cure. It is true some incipient cases, especially those suffering from mild toxemia and no local signs in the lungs, have become arrested after a short absence from home and even without medical aid, but have they really profited in the long run? True, their trouble may have become arrested, but they have learned nothing about the disease and from what is known of the pathology of tuberculosis we may reasonably expect a recurrence which will not be so easy to arrest the next time. Fishberg[2] speaks of patients who have recovered while waiting to be admitted to the sanitorium and who have returned home to question the original diagnosis. While there may be a few such, there are many more whose trouble has progressed because they did not have advice early enough.

Could more incipient cases be induced to take institutional treatment, much of the pessimism as to its value would disappear and a much larger per cent. of recoveries could be returned. Incipient cases would be more easily recognized and the whole question of prognosis better understood if we would only remember that tuberculosis in the beginning, it matters not what part of the body is affected, is a bacillary toxemia recognized by constitution lary toxemia recognized by constitutional nor any other organs and that later on, when infiltration, caseation and softening have produced anatomical changes, it is yet, after all, the toxemia and the patient's resistance which determine the ultimate outcome.

Old advanced cases with extensive destruction of tissue may enjoy a fair degree of health, provided the lesions are walled off sufficiently to prevent the absorption of toxin.

On the other hand, a very early case with only a slight local lesion, which has not had time to be protected by fibrous tissue, may go all to pieces from toxemia.

I believe with Elsner[3] that "in no other disease is the physician more directly responsible for the outcome than in pulmonary tuberculosis."

And I sometimes wonder if we are doing all we should for our patients.

It is a difficult matter to remain quiet long enough to get well. The long, dreary months of inactivity are very irksome and patients are often held to the task by the personality of the physician alone. We have no specific, no cure-all by which we can shorten the time. It is only by increasing the resistance and slowly building up that we effect a cure, but should we continue to let our patients simply loaf while taking the cure when there are well known physical means, such as X-ray, mechanical vibration, high frequency current and static electricity, which might be employed in conjunction with the so-called rest cure.

In conclusion:

1. The time spent in arriving at a diagnosis is not considered as lost, for it is almost as great a mistake to brand a case tuberculous with all the resulting consequences as to fail to recognize the disease.

2. After the diagnosis has been made no time should be lost before commencing treatment.

3. It is economy in both time and money

to send the patient from home for treatment when they can afford to go, provided their means are sufficient to supply as good or better accommodations and they can obtain the necessary care and attention.

4. Satisfactory results can only be expected if the time is spent as it should be under competent supervision.

5. There can be no compromise, makeshift nor subterfuge with the disease once it has asserted itself until arrested or cured.

6. We should not be content to let the patient simply loaf while taking the cure, but should employ other agents as well that are known to assist and improve metabolism.

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THE WASSERMANN REACTION*

By Graham E. Henson, M.D.,
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While the Wassermann reaction is accepted by the great majority of the medical profession as a valuable auxiliary in the diagnosis of syphilis, and a smaller percentage apply the test as a check on the efficacy of therapeutic measures employed, the accuracy of the reaction is to a more or less extent viewed through pessimistic eyes owing largely to a certain amount of misunderstanding existing between the serologist and those coming in direct contact with the diagnosis and treatment of syphilis.

It is claimed by some laboratory workers that for a reliable interpretation of the reaction the serologist should be furnished with a history of the case, not for the purpose of assisting him in rendering a report that will check up with the clinical features of the case, but for the purpose of allowing him properly to interpret what we might term border-line reactions. The great objection to the serologist's being furnished with this information is that by receiving it he is in danger of having it considered that his reports are more or less influenced by clinical histories. It is admitted that this is not as it should be, but nevertheless is a feature that has to be taken into consideration, more especially where the clinician and the serologist are not personally known to each other. For the present, therefore, in the interest of having this valuable test fully relied upon and accepted by the profession I consider it wise for the serologist to abstain from going into the clinical features of cases upon which he is requested to conduct Wassermann tests. He will appreciate that under these circumstances it will frequently be necessary for him to go into more details in rendering his reports than if he were conversant with the clinical aspect of the case. It should, of course, be appreciated by the clinician that in strongly positive reactions or in completely negative ones no data is necessary for the serologist, the reaction in such instances being able to stand purely on its merits. It is necessary, however, to accept negative reactions with a certain amount of reserve under conditions to be discussed later. It is in the border-line reactions that the clinical history is an aid in making a definite, clear-cut report without the supplementary remarks that should accompany reports on such reactions where the clinical features of the case are unknown to the laboratory worker.

In illustration, what interpretation should be placed upon a weak two-plus or a one-plus positive reaction, or what we might properly term border-line reactions? It should be borne in mind that the equations used in reporting Wassermann reactions are more or less arbitary, a one-plus positive representing 25 % deviation of complement, each succeeding figure used standing for a 25 % additional deviation. A two-plus may, therefore, represent any amount of deviation from, we will say, 35 to 50 %, the former termed a weak, the latter a strong two-plus. In the absence of clinical symptoms or of a suspicious history, a weak two-plus representing 35 % deviation of complement should not be made the basis of a diagnosis of syphilis. On the other hand, in the event that there has been a suspicious initial lesion a few weeks prior to conducting the blood test, such a report should be viewed with

*Read before the Duval County Medical Society, Jacksonville, Fla., January 2, 1917.

grave suspicion even if not made the basis of a definite diagnosis. Again in a subject of known syphilitic infection who has received treatment, such a reaction indicates that the infection has not been totally eradicated and that, regardless of the clinical aspect of the case, treatment should be persisted in. It is not an uncommon occurrence to get such reactions in cases having received intensive treatment which have previously given one, two, or even more completely negative reactions. This phase of the Wassermann test will be dwelt upon later in discussing the significance of negative reactions.

Entirely apart from the known facts in certain diseases such as malaria, yaws and other acute infections, and that in acute alcoholism we may get border-line reactions, I do not consider it a safe procedure to report these border-line reactions without supplementary comment, more especially to men who are liable to accept a positive Wassermann of any degree as proof positive that his patient is suffering with syphilis. Bearing in mind that a negative reaction in no instance, under any conditions, completely bars a diagnosis of lues, and that a decided positive Wassermann reaction must be accepted as proof positive of infection, does it not seem a wiser plan in all border-line reactions to give the patient the benefit of the doubt, consider them negative, but advise a continued careful observation of the suspected individual? While I, therefore, advise the serologist, or reserve him the right, either to report these border-line reactions as negative or else to supplement such reports with comments bearing upon their significance as outlined in the preceding remarks, he need have no hesitation in making unequivocally negative reports on serums in which he secures 100 % or complete hemolysis. But in receiving these reports the tables are turned and the clinician in interpreting them must be governed by certain clinical features and the history of the case before he absolutely bars the diagnosis of syphilis, or in the event that the serum is from a treated case accepts it as final proof of a permanent cure. The chief points for the clinician to consider in interpreting negative reports on the serums of his patients are the duration of the suspected infection, and in known cases the length of treatment and the form resorted to.

The Wassermann reaction being dependent upon the presence of antibodies in the circulation of the patient, it is evident that if the disease has not been of sufficient duration to create these antibodies the reaction must be a negative one. It is, therefore, the rule for cases of syphilis during the primary lesion to return negative reactions. It is the writer's belief that the rapidity of the formation of antibodies is largely dependent upon the virulence of the infection,—and possibly effected by the general resistance of the individual. It is probably unusual to get a positive reaction in much less than four weeks from the time of the appearance of the initial lesion, and many cases of undoubted lues will give a negative reaction as late as the sixth week. It will, therefore, be readily seen that a negative reaction in the first few weeks of a syphilitic infection is meaningless, and that in suspected cases with atypical lesions negative reactions should not be allowed to bar the diagnosis of syphilis.

Of even greater moment to the clinician than the application of the Wassermann test as a diagnostic auxiliary, is the use of the reaction to determine the effect of the treatment a known case has undergone. With the more modern methods of administering mercury and especially since the introduction of Salvarsan, the clinical improvement in known cases of syphilis is often little short of marvelous. This does not mean, however, that the patient has made a permanent recovery, although he may remain free from any clinical manifestations in some instances for many years. While there is little doubt that there are some cases of luetic infection which will fail to respond permanently to any and all kinds of therapeutic measures, there is little question that a great many cases of syphilis of the central nervous system occurring past middle life are the result of imperfect treatment of infections contracted in young adult life. The clinician is unable to judge from the symptoms of his patient when it is safe to discontinue treatment, the Wassermann test is, however, an absolute check on the efficacy of treatment and unerringly records when it is safe for a patient finally to be

discharged. Here again, however, the first negative report must be regarded reservedly, for it is not uncommon for a treated case to give a negative reaction only to return to a positive one a few months later.

CONCLUSIONS

The subject is an almost inexhaustible one and a discussion of it could be carried on almost indefinitely. In closing I wish to emphasize the following points:

1. It is advisable for the serologist to abstain from going into the clinical features of a case.
2. He should be guarded in submitting border-line reactions without commenting upon the significance of such reactions.
3. Border-line reactions should not be accepted by the clinician as diagnostic of syphilitic infection unless supported by clinical symptoms.
4. A single negative reaction should never be allowed to exclude a diagnosis of luetic infection.
5. The Wassermann test should be applied from time to time during the course of the disease to note the effect of therapeutic measures employed; and
6. A case of syphilis should not be finally discharged until several negative reactions have been obtained, the last one to be at least eighteen months and preferably two years after treatment has been discontinued.

AUTHORS' ABSTRACTS

Medicine

A Method of Controlling Hyperthyroidism. Leigh F. Watson, Chicago, Ill. Endocrinology, Vol. I, No. 2, April, 1917, p. 178.

A study of cases covering the last four years, in which quinin and urea injections into the thyroid have been used as the treatment of choice, permits the following conclusions: The use of the injection has been without mortality and if used in a hospital by one experienced in thyroid surgery, it should not be dangerous. The patients must be carefully selected, as the method is not a cure all and will not displace surgery in certain cases.

In this group of one hundred cases treated, the quinin and urea injections were used with the following results: The symptoms were relieved in 85 % of the exophthalmic and in 84 % of the toxic non-exophthalmic patients. Fifteen per cent. of the exophthalmic patients were improved and 10 % of the non-exophthalmics were benefited. In 80 % of the exophthalmic patients the goitre entirely disappeared within an average period of five months; in 15 % the tumor was reduced in size and in 5 % there was no change. The tumor disappeared in 75 % of the non-exophthalmic patients; it was reduced in 12 %; and in 13 % there was no change. Four exophthalmic patients were pregnant two to four months. Relief from hyperthyroidism followed injection and they went to term without recurrence and had normal deliveries. The treatment of the exophthalmic type in young adults is most difficult, and should be attempted only under the most favorable circumstances. If the best results are to be secured, hyperthyroidal patients must have at least a year of mental and physical rest after treatment.

Industrial Versus Private Medical Practice. Guy L. Howe, Rochester, N. Y. New York State Journal of Medicine, Vol. XVII, No. 2, February, 1917, p. 84.

Industrial medical practice is a definite form of public health work and as such its principal aim is the practice of preventive medicine. In industry, sick and injured employes are more apt to consult the company physician without delay in cases of minor illness and accident than if such services were not provided. This aids materially in the prevention of wound infection and in the detection of disease before it has a chance to make much progress.

The relationship existing between the industrial worker and the company physician is an unusually straightforward one and is entirely uninfluenced by the element of money. As a result of this, conditions are ideal for rendering the best possible service to the employe because attention may be focused on the medical aspects of the case without a thought being given to the financial responsibility of the patient or the prospective fee.

The physician in industry is in a position to prescribe drugs only when actually needed. In other words, he never finds it necessary to dispense a placebo in order to hold the patient. The attitude of the patient who pays no fee seems to preclude the necessity of always giving medicine. If it is advice alone that is needed, he will go away contented with such advice, whereas, if he pays a physician a fee he will often be inclined to expect something tangible for his money .

Patients in industrial practice may be seen as often as necessary or desirable without opposition on their part—no matter how often seen the physician can not be accused of "running up a bill." The number and variety of cases seen in industrial practice is great, thus providing wide experience for the physician engaged in this work. Physicians connected with the larger industries have the use of unlimited equipment and in this respect possess an advantage over the average man in private medical practice.

Industrial medical practice provides a stimulus for high-grade work for the reason that it requires ability, good judgment and personality to please thousands of employes. Industrial medical practice is definitely established on a firm foundation and its field is being rapidly extended.

Immediate and Lasting Reductions of the Size of the Heart in Cases of Acute and Chronic Dilatation and Dilatation of the Arch of the Aorta. Obtained with a Short Treatment by an Original Method of Corpuscular-Radio-Therapy. Ernest Zueblin, Cincinnati, Ohio. The Lancet Clinic, November, 1916, p. 461.

This report deals with 5 cases of considerably enlarged heart due to endocarditis and myocardial dengeneration, and one case of enlarged heart due to secondary dilatation with aneurism of the aorta. Observations not only of the absolute, but also of the relative cardiac dullness was carefully mapped out, the diameters—transverse, height and oblique—measured before and after treatment are given. In some cases in which X-ray pictures were taken the size of the heart as shown on the plate was compared with the size revealed by palpatory percussion with the result that the surface of the former was about 5 % larger than the figures obtained with palpatory percussion. Comparison with cases treated in the old way with the Carel cure, rest in bed, digitalis medication showed the advantage of the new treatment. The latter consisted in the direct application to the cardiac region of the so-called "applicator" — special electrode through which the high frequency waves were sent through the patient's body for a varied length of time not exceeding four minutes. The current is obtained through an X-ray apparatus or the terminals of a static machine, the strength of the primary current in the X-ray coil not to exceed 9 to 10 MA. The practical and lasting results in all these cases treated a few times may be summarized as follows: Striking reduction in the size of the cardiac dullness, better sustained heart sounds, lessened pulse rate, lessened systolic blood pressure, even in aortic aneurysm. Subjectively dyspnea and also precordial pain were reduced or disappeared. There followed a better working capacity of the patient, even in cases in which ordinary methods of treatment had failed. A few treatments are sufficient for obtaining good and lasting results.

The Significance of Lamblia Intestinalis in Stool Examinations. A. H. Logan and A. H. Sanford, Rochester, Minn. The Journal of Laboratory and Clinical Medicine, Vol. II, No. 9, June, 1917, p. 618.

This paper is based upon 66 cases in which Lamblia intestinalis has been found in stool examinations. In 41 cases the Lamblia was the only organism that might account for the complaint. In 25 cases there were other organisms or pathologic conditions that might account for the trouble. Lamblia were found in 1 % of the stool examinations made at the Mayo Clinic during the past six years (6,000 cases). Most of these cases came from the Northern states and three from Canada.

No diagnostric syndrome is found without a stool examination. History of preceding or present diarrhea, usually without blood or mucus (the organism inhabits the upper intestinal tract) often with most or all of the stools in early morning, rumbling and rolling in the intestine, indefinite abdominal pain, an "all in" feeling with "nervous indigestion," are suggestive. After the initial attack of diarrhea, constant looseness, alternate constipation or diarrhea or constipation may remain.

The indefinite abdominal picture with long history led to 13 abdominal operations, only 3 of which were justifiable from the results. Thymol and methylene blue were used in the treatment of some of the cases, thymol giving the better results.

Conclusions: (1) Lamblia intestinalis should probably be considered a pathogenic parasite; (2) we have obtained no definite syndrome in our series; (3) the removal of Lamblias is difficult; (4) the best results have been obtained from thymol medication.

The Importance of Duodenal Alimentation in Severe Dyspepsia Occurring After Gastroenterostomy. Max Einhorn, New York, N. Y. Medical Record, Vol. 91, No. 24, June 16, 1917, p. 1023.

Not rarely after a gastroenterostomy new symptoms of a severe type appear, which may be as violent as those existing before the operation. Peptic ulcers and adhesions are the most frequent conditions encountered. Some of these cases resist the ordinary methods of treatment (lavage, bismuth, alkalies, etc.). Einhorn advocates trying in this type of post-operative dyspepsia the treatment by duodenal elimination.

Whenever we have to deal with post-operative dyspeptic symptoms of a graver nature, it is best to make a thorough analysis of the case with regard to gastric secretion and food retention. Examination with the duodenal bucket is here of great importance. The string attached to the bucket shows whether there is a patent opening leading into the duodenum or jejunum; whether there be ulceration at the stoma, and ultimately whether the bucket has passed through the pylorus or through the new opening.

In all cases in which the duodenal bucket has reached either the duodenum or the jejunum, treatment by duodenal or jejunal alimentation may be tried. This procedure gives complete rest to the stomach and pylorus, or the new opening, respectively, and so serves to ameliorate the condition.

Einhorn reports the result of ten cases. Eight of the patients treated by duodenal alimentation made a complete recovery, not requiring any surgical aid.

Of the other two, one felt considerably improved during the period of duodenal alimentation, but as soon as the tube was removed and nourishment was given in the usual way the pains returned. A provisional diagnosis of severe adhesions with perigastritis was made, and it was necessary to reoperate the wound. The diagnosis was corroborated by the laparotomy, and an anterior gastroenterostomy was performed.

The other also derived considerable benefit from duodenal alimentation for several months, but the formation of a new ulcer, with hemorrhages, necessitated surgical intervention.

Duodenal or jejunal alimentation is therefore of distinct value in severe post-operative disturbances of the stomach.

TROPICAL DISEASES AND PUBLIC HEALTH

ADVANCES IN PUBLIC HEALTH WORK IN OUR STATE (OKLAHOMA) DURING THE PAST YEAR*

By John W. Duke, M.D.,
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It is reported that one of the great leaders of mankind, a man whose life, judged by ordinary standards, had been full of big things accomplished, when he faced his last illness, sighed and said: "So much to do; so little done." Whether the story be true or not, to a certain extent I think it represents the viewpoint of every conscientious public health official. When health conditions in a state at the conclusion of a given year are compared with the conditions at the beginning of that period, it may seem that much has been accomplished and encouraging progress made. But in our work every goal gained seems to open up vistas for new achievements, new problems continually are arising. No matter how much we have done, there seems to remain even more to do.

This is not the viewpoint of pessimism; it simply is the viewpoint which recognizes the wide and increasing scope of public health work. As a matter of fact, the progress made in the State of Oklahoma during the past year has been encouraging. It is a comparatively young state; the population is rapidly increasing; and our towns and cities are growing swiftly. This means that new problems and complications continually are arising. Unceasing effort is necessary to meet them. An encouraging feature, however, is the attitude of the public. More and more our people are coming to realize both the importance of public health and the fact that the sole and only end desired by the State Board of Health is to better conditions, to improve the health of the public. The result has been an added and constantly-growing appreciation and sympathy with our work. The value of this spirit of course can scarcely be over-rated. With an unsympathetic or even neutral public the best efforts of a health department are handicapped.

The Oklahoma State Board of Health feels that educational work of real and great practical value has been accomplished in the State during the year just past. There are issued by the Board each week four bulletins on hygiene, sanitary and general medical subjects. These bulletins are intended for the people, that is, the ordinary newspaper reader. They are written in non-technical terms and effort is made to have them easy to understand. They are sent out to nearly 400 newspapers of our State—from the largest daily to the smallest country paper. Of course not every bulletin is used by every paper. But a very large proportion are published regularly by nearly all the papers. For instance, the leading newspaper of the State regularly publishes such a bulletin in its Sunday issue, which has a state-wide circulation.

We are thus able to obtain a wide and constant publicity, which we think of great practical service. In fact, we are able to reach to a considerable degree practically every family in the State. The care of children, proper food for babies, care of the teeth, advantages of hygienic living and how to attain it, proper sanitation, descriptions of common diseases and precautions to be taken, and other health topics of popular interest are discussed in the bulletins.

The annual State Fair in September at Oklahoma City is always an event of great interest in our State. This year it was attended by over 125,000 visitors. A handsome exhibit had been prepared by the State Board of Health, which daily was visited by many thousands. By means of placards, illustrations and other exhibits, practical instruction was given in regard to tuberculosis, the danger from flies, the advantages of clean and hygienic living.

*Read by title in Section on Public Health, Southern Medical Association, Tenth Annual Meeting, Atlanta, Ga., Nov. 13-16, 1916.

the care of babies and kindred topics. In addition literature describing the work of the State Board of Health, how it is striving to conserve the public health, and instruction on the care of the body and the prevention of disease, was distributed. The interest taken by the visiting public in the exhibit was most gratifying. A special booklet of about 10,000 words had been prepared for this occasion. Many thousands of copies were given to visitors at the fair and later copies were distributed by the State Board of Health to health officers, physicians, members of women's clubs and otherwise throughout the State.

In connection with the education of the public to the importance of health work, a number of lectures have been given over the State by the Health Commissioner and representatives of the Board. These lectures have been delivered at the State University at Norman, before the State Agricultural and Mechanical College at Stillwater, and at a number of other state institutions. In addition lectures, in some cases illustrated, on health topics have been given in connection with the University extension courses in Oklahoma, thus obtaining a wide publicity. The scope of this work is being rapidly extended. It has been gratifying to observe that not only is the field growing greater, but that the interest taken is steadily becoming more intense.

During the year the Board has distributed free of charge in the State over $10,000 worth of serum, in addition to that which has been paid for. By obtaining serum through the medium of the State Board of Health physicians are assured of its purity and promptness of delivery. Serums and vaccines are distributed for protection against smallpox, diphtheria, typhoid, hydrophobia and other diseases. Where patients are able to pay for such treatment, it is expected they will do so. Where the patient is unable to pay, or payment would involve a hardship, it is furnished free by the State Board. The attending physician certifies in such a case that the patient is not able to make payment. In this manner an indigent patient is able to get needed treatment without delay or red tape. Of course it is probable that the generosity of the State is sometimes abused. We believe, however, that it is better to suffer an occasional imposition than have deserving patients deprived of treatment on account of their pecuniary inability.

The first requisite toward any successful and extended public health work is of course full and exact information about existing conditions in a given community. To that end the Oklahoma State Board of Health, during the past year, has made a number of sanitary surveys through various sections of the State. Others are in progress and we hope continually to extend the scope of the work. In these surveys we have made a study of water and sewage conditions, of the food and milk supply, the general sanitary conditions throughout the community, and other factors directly bearing upon the public health. Bacteriological and chemical examinations of water, food and milk supplies have been made. As a result of such surveys the Board has been enabled not only to gain valuable information, but to take the necessary steps toward improving the health of the community in question.

One of the most important phases of our work in this direction has been a special sanitary survey, undertaken in harmony with the State Educational Department, of all the State educational institutions. The purity of the water, milk and food supplies were thoroughly investigated. Examination was made of general hygienic and sanitary conditions, both in the institutions themselves and in the towns in which these institutions were situated. The condition of streets, alleys, yards, garbage disposal, sewage connections and other factors directly affecting the health of the students as well as of the community in general were studied in detail. Careful reports were made to the State Board of Health. A number of recommendations for immediate action were made as the result of these investigations, and in addition the Board acquired a mass of invaluable information for future and more permanent improvements. A similar survey is now being made—in fact, is almost completed — in Guthrie, one of the most important of our cities. It is gratifying to state that while of course there are many improvements yet to be made as

the result of these surveys, general conditions both in our institutions and in Guthrie and other places were fairly good and that a general spirit of co-operation with the State Board of Health was displayed. In practically every instance the Board has been able to take such action as seemed necessary without resorting to drastic measures. In general, the recommendations of the Board have been not only carried out, but welcomed. Public officials and citizens generally instead of resenting the pointing out of unhygienic conditions in their town, have been quick to recognize them and willing to take the steps necessary to improve them. Often the Board of Health is able to bring about improvements which the local officials had noted and desired, but been unable to accomplish.

"We are glad to have the State Board of Health order sewage connections, the cleaning up of our streets and the removal of other unwholesome conditions," remarked the mayor of one of our smaller cities. "You see, practically everybody in town is an acquaintance of mine. When I tell a man to make an improvement, perhaps he will do it and perhaps not. But when the State Board of Health tells him, he does it and does it quickly."

This attitude was typical of that of officials and leading citizens in many other communities.

Like many other states, Oklahoma had this summer to face the problem of infantile paralysis—not the problem of fighting an epidemic, but of preventing one, of not letting the disease get a foothold in the State. Early in the summer certain quarantine precautions were taken, although it was not found necessary to impose restrictions which would have been burdensome for travelers. Altogether, there were slightly over a score of cases in the entire State, of which about 20 % were fatal. The cases were sporadic and scattered, two being the greatest number in any given community. The communities in which these cases occurred were widely separated, and in no case could a definite cause of infection be traced. As soon as a case occurred the county health officer instantly telegraphed to the State Board of Health and measures were taken against the spread of the disease. Infantile paralysis is of course a disease which arouses a public apprehension all out of proportion to the actual number of victims. Advantage was taken of this state of public sentiment to institute thorough clean-up campaigns in several communities and to bring about better hygienic and sanitary conditions. It is likely that the direct and indirect effects of this campaign in reducing the sickness and death rate will many times counterbalance any loss from infantile paralysis.

Encouraging progress has been made in meeting health problems of special moment to Oklahoma, of which the most pressing are probably those which concern public water supply and sewage disposal. The situation in Oklahoma in regard to the public water supply, as in other Southern and Western states, is more difficult than in many Northern and Eastern states. For many of our cities it is absolutely impossible to draw a water supply from some uncontaminated lake or reservoir in the hills or mountains. Deep wells sometimes suffice for smaller communities, but this source often is not practical for larger places. It is absolutely necessary to depend for the water supply upon some river or stream, which may rise hundreds of miles away and flow through more or less thickly populated sections. As the population of our State increases the problem grows more complicated.

I am strongly in favor and hope soon to obtain legislation whereby all plans for the installation or extension of water or sewage systems must first be submitted to the State Board of Health for approval. This would not only guarantee the correctness and efficiency of the plans, but would prevent one community from infringing upon the rights or endangering the health of another. City officials, even when they wish to be fair, are apt to consider such a question simply from the viewpoint of their own community. The State Board of Health would be impartial and fair to all. It is obvious that no community has the right to endanger the health of another, but unless there is some central authority such as a state board of health, this is always liable to occur. There is also need for reformation of the Federal laws in regard to purity of the water supply available from rivers which run through more than one state.

We have made during the past year encouraging progress in bringing about closer co-operation between the Department and the medical profession. A meeting, the first of a series, is to be held within a very few days, at which the attendance of every county medical officer in the State is expected. At this meeting the work of the Board, plans for the future and the manner in which the county health officials can co-operate in these plans will be discussed in detail. Demonstrations will be given of the work of the State Laboratory and the bearing of this work on public health fully explained. It is expected that in this way the county medical officers may become an agency not only in the general extension of health work, but also in the establishment of closer relations between the medical profession and the State Board.

Preliminary steps have been taken for raising the standard of the collection of vital statistics in Oklahoma. Oklahoma is not yet in the Federal Registration District, but we hope that it soon will be eligible. For the most part the physicians of our State are dependable in regard to the sending in of vital statistics. There is a small proportion, however, located for the most part in the rural sections, who are far too careless or indifferent in regard to this extremely important phase of public health work. The unfortunate feature of this is that the carelessness of the few to a large extent nullifies the careful work of the many. It is obvious that vital statistics, to be of any real value, must be fairly complete. Without full and accurate vital statistics a health department is working in the dark. No practical steps can be taken to protect the public health unless we first know in what manner and to what extent it is threatened by disease. Unfortunately our laws, or rather their manner of execution, are deficient in this regard. The law provides a penalty which is sufficiently drastic. The actual imposition of this penalty, however, is quite another matter. Such prosecutions are pressed by the county attorneys. In too many counties the attorneys, on account of personal or political influence, are reluctant to prosecute with any degree of vigor. The result is that convictions are almost impossible to secure. Of course, we do not wish to prosecute except in flagrant cases. But when such cases do arise much better results would be obtained if the prosecutions were conducted by a representative of the State Attorney-General's office instead of by a county official. We hope before long to obtain legislation to that end. We will then be in a position to secure fuller and more accurate vital statistics.

In no phase of public health work have we made greater advances or progress of more real practical benefit than in connection with our State Laboratory. Our equipment is now satisfactory, the force is competent, and we have succeeded in getting in closer touch with the medical profession of the State, so that they are making a more extended use of the facilities of the Laboratory. In this connection an educational campaign has been conducted, which already has proven of service and which we are steadily extending. We have a large mailing list and are continually sending letters to physicians all over the State, bringing to their attention the facilities of the Laboratory. Within a few months this list has increased over 100 % and we hope before long to reach practically every physician in the State.

A closer co-operation between the State Laboratory and the county health officers has been brought about. The county health officers are encouraged to take samples, not alone of waters, but of all kinds of food products. Special containers and vessels for this purpose are furnished by the Laboratory, with specific directions, thus insuring the purity of the sample taken. It is the aim of our Department in this connection to make all food articles manufactured in Oklahoma strictly accord with both the Federal and the State standards. We hope that by the close of another year the label "Made in Oklahoma" will mean that the article in question has passed a thorough test and can be depended upon for purity.

Another encouraging feature of our Laboratory work in the past year has been the wider recognition by physicians of our State of the special facilities offered by the Laboratory in the diagnosis of various diseases. These facilities, which are freely offered, are of special value to physicians living in small communities. The

value of laboratory work in connection with the differential blood count, the Widal, Wassermann, typhoid and diphtheria tests, the testing of urine and many other phases of diagnostic work, are being more and more appreciated and more and more used. There has also been an encouraging increase in the amount of pathological work in connection with the examination of tissues.

I have dwelt particularly upon the advances we have made in Oklahoma during the past twelve months. Yet a larger view is necessary to appreciate fully the scope and significance of public health work, either in Oklahoma or in the other states represented at this convention. Much progress has been made in recent years, yet I think we are all justified in considering ourselves pioneers in this work. Twenty-seven years ago Oklahoma was open prairie. We have come a long way during that twenty-seven years, but the goal in public health work is one which ever lies ahead. We of today are laying the foundations upon which the work of the next twenty-seven years, of succeeding generations, must build. It is a work of many difficulties, some encouragements, of infinite small details. It is a work which emphatically is worth while, for we are striving for healthier men and women. And healthier men and women are men and women who are happier and better in every way.

During the past century we have seen the perfection of machines. Both in his conquests of nature and in instruments of destruction mankind has attained an efficiency which would have seemed miraculous a few decades ago. The greatest contest of all time, which is now in progress, has produced as yet no military genius to compare with Napoleon Bonaparte, no naval leader the equal of Nelson. Yet all the armies of Napoleon would go down before a single regiment armed with modern weapons; the navy of Trafalgar could not cope with a third-class modern fighting ship. In the industrial field the telephone, telegraph, wireless and the aeroplane are daily accomplishing feats which a comparatively short time ago would have seemed like fairy tales. Yet we who are engaged in public health advancement are working toward the perfecting of an infinitely more cunning and complicated machine, a machine whose importance is so much greater than that of any invention that comparison is impossible—the human body.

Much has been said and written in recent years of the wonderful progress of the South and Southwest, of our beautiful and fast-growing cities, of the establishment and extension of huge industrial plants, of hundreds of millions taken from mines, oil wells and fertile fields. It is well that this is so. We are proud and rightly so of the progress made in these directions. But even more important is the progress made for the protection of childhood, for the control of disease, for the bettering of sanitary and hygienic conditions. There is no asset which a state can have that can equal healthy men and women. Coal and iron mines may become exhausted; the flow of oil may cease; for the state or nation whose manhood and womanhood are healthy there is no cause for fear. Its future, both in material and other ways, is assured.

Back of every great work accomplished since the beginning of time has been an ideal, an appeal to the imagination. It is this ideal which stimulates and revives every man engaged in a big task when the multiplicity of details, the inevitable discouragements, press upon him and make him ask himself, "Is it really worth while?" For those who like us are engaged in public health work there can be but one answer to that question, "There is no work in the world more worth while." To those who can read them aright the statistics showing a decrease in infant mortality, the addition of a few years to the span of human life, are vibrant with meaning. They signify that mothers are rejoicing in the health and happiness of their little ones instead of following a small coffin to its last resting place. They show that countless thousands have had the chance for happiness, for improvement and self-development instead of being cut off prematurely.

There is one final test which must be applied to every man's life, to every religion, to every work. This test is: "Is the sum of human happiness greater, the total of human misery less because of this life, this religion, this work?" It is the final

acid test of all that is worth while. Judged by this test we who are engaged in public health work have the right to be proud of the past and hopeful for the future.

PRE-NATAL HOOKWORM INFECTION

By H. H. Howard, M.D.,
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So far as I have been able to ascertain from literature available to me, the earliest age at which a diagnosis of hookworm infection, made by microscopical examination of feces, has been reported, is three months.

It has been accepted more or less generally that examination for this disease in children under six months of age was scarcely worth while, as the likelihood of a child's coming in contact with the infection earlier than six months was too slight to be considered. While this is perhaps a safe presumption in the southern part of the United States, where the infection is distinctly seasonal, and where other local conditions are operative in confining it in a large measure to people between the ages of six and eighteen, it does not necessarily follow that the same presumption is safe in the tropical countries where temperature, rainfall and living conditions, throughout the entire year, would seem to promote a universal and ever-recurring infection irrespective of age.

My attention was first called to the possibility of a much earlier infection than we had been led to expect by the considerable number of ankylostome cases met with in infants of one year and younger in Ceylon, in 1916. In these cases the apparent clinical manifestations were out of proportion to the degree of infection and the length of time these children could have had the disease had they acquired it in the usual way and post-natally.

We are told by Castellani and Chalmers in their "Manual of Tropical Medicine" that in cutaneous ankylostome infection the cycle of development of the embryo is completed when the eggs appear in the feces, which is "four to five weeks after infection."

Braun, in "Animal Parasites in Man," makes some distinction between mouth and cutaneous infection as follows:

In cases of larvæ entering the body by the mouth, ova "appear in the feces about four to five weeks after infection. In cutaneous infection seven to ten weeks elapse 'till the time of the appearance of the first ova in the feces."

Quoting from Dock and Bass: "Looss found eggs in the feces after skin infection in 30 to 35 days. In the accidental infection in himself Looss did not find eggs until the seventy-first day, the same period that elapsed in Pieri's case. * * * Tenholt's assistant found a few eggs in his stool forty-seven days after skin infection."

Quoting from Public Health Bulletin No. 32 (Stiles): "Claude Smith found eggs in the feces six and one-half weeks and seven weeks after experimental skin infection on two persons with the American parasite."

The foregoing statements of these investigators as to the time necessary to elapse after infection before ova may be found in the feces gives us a minimum of four weeks in mouth infection and of 30 days in skin infections, with a preponderance of opinion in favor of a longer period in the latter.

In view of this, then, it would seem that we may safely assume that if a newborn babe came in contact with the infection in the hour of its birth and became infected through either of the known avenues of entrance (mouth or skin), ova could not appear in the stool sooner than the end of the fourth week after its birth.

It follows that ova in the feces of an infant two weeks after birth, or at any time in its existence prior to the end of the fourth week, must be the result of a prenatal infection.

With this premise I submit the following report of a case of infection in an infant of 14 days. This case was discovered during a recent visit to British Guiana and the data were carefully collected later by Dr. F. W. Dershimer, Supervising Medical Officer of the Ankylostomiasis Campaign in that colony:

CASE REPORT

Infant.—African descent; born September 24, 1916; normal labor; child fairly well developed,

presenting no noticeable clinical symptoms or abnormalities. Microscopical examination of feces October 8, 1916, when child was 14 days old, revealed the presence of the ova of hookworm. Reexaminations twice in the next few days, each revealing the ova, verified beyond doubt the diagnosis. In these latter examinations the stools were collected and examined personally by Dr. Dershimer. Treatment consisted of castor oil in laxative doses and 1 drop doses of oil chenopodium. The first treatment was administered on November 6, 1916, when the child was 6 weeks old. One week later a second and similar treatment was administered. Examination of numerous slides from stools collected as late as the seventeenth day after the last treatment showed negative results.

Mother.—African descent, 37 years of age, eight living children. Presented clinically the usual symptoms of hookworm disease. Microscopical examination showed the presence of hookworm ova in the feces. She gave a history of an "itching skin disease between the toes" during pregnancy which we may safely presume was "ground itch," or the cutaneous manifestations of ankylostome infection. The mother was given treatment and cured.

In giving consideration to the possibility of ankylostome infection of the fetus by way of the mother's body there are several factors to be considered:

The infective larvæ must find their way into the body of the mother first by one or the other of the two known avenues of entrance, i. e., mouth or skin.

In infections by the mouth we are told by Looss, and other investigators agree, that the larvæ when swallowed "have only to pass through the pylorus to reach their goal" and that there is no need for any excursion to parts outside the alimentary canal. These larvæ, then, of direct infection, may safely be dismissed in the consideration in hand.

In case of cutaneous infection we have a different condition. In these infections we learn from Looss, the results of whose exhaustive investigations on ankylostomiasis are published in Vol. IV, "Records of School of Medicine" (Egypt), that "when larvæ have penetrated the skin it is evidently the lymphatic system into which they first seek to find their way." He continues: "But, having reached a lymphatic vessel, they apparently continue their journey without delay. By the route of the lymphatic and through the ductus thoracicus, or the smaller main lymphatic trunk on the right side, the larvæ finally reach the right side of the heart." Later he states: "While on this journey through the lymphatic system I have actually observed the larvæ in the lymphatics of the skin, in the vessels leading to and from the glands of the groins and shoulders, in the ductus thoracicus and one of its contributaries. * * * At first we have seen the larvæ chiefly enter the lymphatics and only later the blood vessels, * * * but so far as I have observed, it (the number of larvæ in the blood vessels) never reaches even approximately that of the larvæ which penetrate the lymphatic ducts." Further he states of the blood vessels: "It is at first exclusively the veins which the larvæ enter, but they are found,—sometimes in great numbers,—in the arteries also. * * * That penetration (of arteries) actually occurs is shown by the numerous individuals lying in the lumen. * * * Theoretically, it is conceivable that some of them subsequently obtain access, either directly through the (pulmonary) capillaries, or indirectly from the tissue of the lungs, to the ultimate ramifications of the pulmonary veins,—they would then be carried away again by the circulation, brought back to the heart (left side) and scattered through the body by means of the arteries. That this supposition is actually realized seems to be proved by the fact that larvæ are not seldom found in the pulmonary veins."

A summing up of these statements of Looss would seem to be, then, that both of the principal circulating fluids of the body, the lymph and the blood, and in the case of the latter both the venous and arterial currents, transport the infective larvæ through the body, normally perhaps, along a more or less prescribed course; often, however, they transport many of the infected larvæ, and possibly always some of them, to all parts of the body.

In pregnancy we have a normal physiological incident producing very abnormal conditions,—conditions not mentioned and perhaps not especially contemplated by investigators in their research work on this disease. We have a determination of a great volume of blood to the pelvic viscera to nourish and promote the development of the fetus and to remove effete matter from the fetal circulation; the entire pelvic region is in a high state of non-pathological congestion and to accommodate this new condition the blood vessels of the

uterus and its appendages become much enlarged, more tortuous, and in the uterus itself, at the placental site, are found the uterine sinuses, large sacculated blood spaces with very thin walls.

The lymphatic vessels of this region likewise undergo hypertrophy and hyperplasia, greatly increasing the volume of their contents. These changes in structure and the increase in the volume of blood and lymph flowing to these parts not only greatly increase the likelihood of the invasion of this area by infective larvæ, but furthermore produce a slowing or stagnation of the blood—and lymph—currents which must be inviting and favorable to the larvæ, for here they may, as it were, take pause, in this quiet corner of the maternal anatomy, and investigate new possibilities of mischief.

While it is quite true that in no case do the maternal and fetal blood currents intermingle, yet the thin septum of tissue between them, which permits the osmosis of both fluids and gases, could offer but little resistance to the passage of larvæ from the maternal side to the fetal circulation, for Looss further tells us that the "loose connective tissue of various organs, especially that of the dermis, does not appear to offer the least resistance to their advance. They move in it with a rapidity and grace which are simply wonderful." Once in the placental circulation, they would be carried up the umbilical veins to the body of the fetus, likely following, from this point on, their usual route to the right side of the heart with possibly certain variations due to differences in the fetal circulation as compared with that of the adult. From the right side of the heart by way of the pulmonary arteries the larvæ would reach the lungs, and thence through the bronchioles, bronchi and trachea to the pharynx and alimentary canal.

It is obvious from these conclusions that the fetus must have reached a stage in its development fitting it for the reception of the infective larvæ. This would not be earlier than the fourth month when the intestinal canal is sufficiently developed to contain meconium, and probably not until later would the fetus participate in a maternal infection.

How often this phenomena does occur, what proportionate degree of the maternal infection the fetus may regularly receive, what part pre-natal ankylostome infection plays in the occurrence of marasmus, obstinate gastro-intestinal disturbances, and other forms of wasting illness in infancy which are so often seen in the tropics, where wide infection exists, further investigations must determine.

61 *Broadway.*

A SMALL OUTBREAK OF TYPHOID FEVER ATTRIBUTED TO WATER*

By Mosby G. Perrow, Ph.D.,
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During May and early June of the year 1916 occurred in Lynchburg, Va., a mild outbreak of 12 cases of typhoid fever. A thorough investigation, of course, was made in each case, and the results of the investigation excluded the possibility of infection from either milk or contact with a common carrier. There were no flies and most of the houses of the residents were of the best sanitary arrangement and condition. As far as the investigator could determine, the only possible source of infection not absolutely excluded was water.

The City of Lynchburg gets its water supply from an artificial lake holding 500,000,000 gallons, fed by Pedlar River, a stream draining a mountainous, largely wooded, and sparsely settled watershed. The watershed drawn upon has an area of 39 square miles, or 25,000 acres in round numbers. About 800 people live upon the shed, giving a population of 20 per square mile. The lake, somewhat over a mile long, is ideally situated between two mountains which are entirely covered with forest. The majority of the people upon the watershed live at a distance of ten miles or more above the lake and their mode of living is supervised by an inspector. In addition to purification by storage the water is treated with liquid chlorine. As a rule the purification by storage seemed ample before the application of chlorine, but at times after a rain the water would get somewhat turbid and B. Coli'

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would appear in 10 c. c. samples. Following the application of chlorine in November, 1913 the analyses showed at once a 90 % decrease in the total bacteria count and it was very seldom that colon appeared.

The water from the lake comes to the city by gravity through a pipe 22 miles long. Most of it is distributed from two reservoirs, but a part of the city known as Rivermont is supplied directly from the main before it reaches the reservoirs. Rivermont thus gets its water two to five or more days earlier than the rest of the city and has from two to five days less of storage. The rest of the city thus by having longer storage has a greater protection against water-borne diseases. It also has an additional protection on account of dilution. Should the water in the main pipe be polluted with bacilli, say for an hour, then the people drinking directly from the main would get their water more heavily charged with bacteria than those drinking from the reservoirs, and would be more likely to contract the infection.

If, then, the water should ever cause typhoid in Lynchburg we would naturally expect the disease to appear first in Rivermont and Rivermont to have a larger proportion of the cases. This is exactly what happened. Of the twelve cases, ten were in Rivermont. Of the two remaining in the rest of the entire city, one was the last of the twelve, and the other had an onset a week later than the first of the Rivermont cases. The analyses showed colon bacilli in 10 c. c. of water from the Rivermont section on May 13, and for several days thereafter, and also a total bacteria count as high as 45 on agar at 37 degrees, the average count being from 8 to 15. An inspection of the chlorine plant which is located at the intake of Pedlar Lake disclosed that chlorine from one cause or another had at times failed to flow into the main and thus there were intervals when untreated water reached the consumers. Showers on the watershed had probably washed some typhoid bacilli into the river and a few had survived the passage through the lake and escaped contact with chlorine. The surface wash could not have been large, for the turbidity of the lake at the intake remained steadily at 5. It is worth while to recall here that in April two cases of typhoid were reported on the watershed twelve miles above the lake. These cases were handled with every possible precaution.

In Lynchburg for the five years prior to this time (authoritive records went back for only five years) careful investigations had failed entirely to implicate the city water in the typhoid that occurred. On the other hand, all evidence had unmistakably pointed to the privy and housefly, and a few wells, as the definite cause of 85 % of the disease. City water and milk had been clearly acquitted of suspicion. True, on several occasions B. coli had appeared in 10 c. c. samples, but on occasions which were followed by no typhoid. This outbreak also occurred at a season of the year when stored waters are supposed to be the least apt to infect, at a time when a water ordinarily safe as shown by both analyses and experience would not commonly come under suspicion. Condemnation of the water, too, by the analyses now is more from hindsight than from foresight. At most the water analyses in May could only have made one slightly suspicious. With the history of the water as known, few men would have been bold enough to condemn the water as dangerous before the outbreak occurred.

The inference drawn from the outbreak is that we can not exert too much care or exact too high a standard with our public water supplies. The quality of the Pedlar water had been passed upon by several specialists of undoubted competency and had been pronounced safe, and in this opinion the speaker concurred. The sole lapse from the conditions imposed for safety was that at intervals lasting only a few hours, occurring probably three or four times a month, chlorine was cut off and yet during these brief intervals the bacilli which in the untreated water but rarely reached the intake, seems to have gotten by and caused infection.

SURGERY, GYNECOLOGY, OBSTETRICS AND GENITO-URINARY DISEASES

GYNECOLOGIC ORIGIN OF NERVOUS MANIFESTATIONS*

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Nervous manifestations as an accompaniment of gynecologic conditions are extremely common. The problems presented by these cases are often manifold and difficult. The question arises, are we dealing with a pure functional neurosis, an organic nervous disorder, or is the nervousness more or less the outgrowth of the gynecologic condition? The proper management of the case depends upon this determination. Pelvic symptoms are frequent in women with functional neuroses and the women becoming consciously aware of functions that are normally only sensed by the subconsciousness, may imagine that they are the victims of all sorts of "female troubles." Such patients are not gynecologic and their attention should be led away from the pelvis. Local treatments, operations, etc., will, as a rule, work nothing but harm to them.

On the other hand, it is frequently very difficult to determine, with absolute assurance, that the pelvis is perfectly clear. Pelvic adhesions, which are a common source of pain and discomfort, are often not to be made out. A careful history and a thorough study of the patient will be helpful. The assistance of a neurologist may be necessary. The possibility of an organic nervous lesion must always be kept in mind.

Women are more prone to nervous disorders or neuroses than men. The clientele of the average neurologist is composed largely of women. These neuroses manifest themselves most frequently during the period of sexual activity, between puberty and the menopause. They are not commonly met with at the extremes of life. During her sexual life a woman is constantly passing through a monthly cycle in which her entire organism participates,—an ebb and flow of her vitality. Menstruation is not a local phenomenon but a systemic phenomenon with local manifestations. There is a close and important relationship between the endocrine system and menstruation; and derangement of many of the glands of this system is accompanied by nervous symptoms more or less marked. Therefore, it is small wonder that the nervous equilibrium of many women is upset at the time of the menstrual period. Havelock Ellis calls attention to the fact that a number of investigators have found that among women criminals and suicides the acts were in the great majority of cases committed during the menstrual period. He also states that among insane women the insane impulse becomes more marked during menstruation, and he says that: "These facts of morbid psychology are very significant; they emphasize the fact that even in the healthiest woman a worm, however harmless and unperceived, gnaws periodically at the roots of her life."

That derangement of the endocrine system may be the important factor in the production of nervous symptoms in connection with various other gynecologic conditions may be true, but, in many cases, the pelvic condition, *per se*, is primarily responsible. That gynecologic conditions are a frequent source of nervous manifestations can not be denied. The intensity of the nervous symptoms depends not so much upon the extent of the lesion as upon the nervous organization and stability of the patient. A most extensive condition with uterine displacement and adherent adnexa, such as we often see in colored women, may exist with few if any symptoms in this race, whereas a minor and insignificant pelvic affection may completely undermine the nervous reserve force of a more highly organized white woman. It is somewhat of a mooted question just how the nervous symptoms are produced. The neurologists have gotten away from the idea that it is a simple reflex phenomenon. The effect of pelvic disease may be and probably is largely psychic

rather than physical. Suffice it to say that many gynecologic conditions are a constant drain upon the reserve nervous energy. Crile has showed in a most graphic way the effect on the cortical cells of prolonged or abnormal peripheral stimulation. It is readily conceivable that the constant nagging discomfort of a pelvic affection could produce similar changes in a patient's cortical cells which might lead to nervous symptoms. The sense of weight from a retro-displaced uterus; the drag of a heavy cystic ovary; the constant nagging pain and discomfort from adhesions or chronic urethritis or urethral caruncle; the bearing-down feeling and backache and fatigue that accompany relaxations of the perineum; in fact, any gynecologic condition that gives rise to symptoms, however slight, and that keeps the woman's attention more or less centered on the pelvic organs, is bound to deplete her reserve nervous force in time. The mere consciousness of a pelvic disorder is disturbing to most women and is sufficient to stimulate their imagination and increase their capacity for introspection. We can not get away from the psychic element, but certainly it is not the sole factor in the production of nervous symptoms.

In this particular class of patients most gratifying results can usually be obtained by proper procedures. I have seen nervous symptoms greatly improved by simply supporting a retro-posed uterus with a pessary. Again, the repair of a relaxed perineum may be all that is necessary. This operation not only reconstructs the support to the sagging pelvic contents, but it makes marital relations more satisfactory in many instances, and this may be an important factor. Suspension of the uterus, relief of a chronic urethritis or cystitis, removal of a "grumbling" appendix, adjustment of a properly fitting abdominal support, anchoring of a ptosed kidney, colopexy,—all these procedures and many others will often give brilliant results in selected cases. The mental state is changed, the physical condition is improved and in many cases nutrition is bettered. Pardhy thinks that the abnormal by-products of perverted function in a displaced kidney may have a definite effect upon the cortical cells and he reports a series of patients with marked mental disorders on whom an indicated nephropexy gave very great improvement or cure in mental symptoms in 50 % of the number. This might also hold true with other ptoses.

It is of the utmost importance to go thoroughly into these cases in order to discover all the conditions that may be factors in the drain upon the reserve nervous force and an endeavor should be made to correct them all. To fix up a kidney and overlook a chronic appendix will not give good results. To suspend the uterus by the round ligaments and leave the cervix swinging forward in the pelvis, as is often done, will frequently fail to relieve all the symptoms. With retro-displacement of the uterus there is usually a descensus also and shortening of the utero-sacral ligaments is just as important as shortening of the round ligaments. To suspend a uterus and fail to repair a relaxed perineum or to remove a chronic appendix and neglect a kidney that is giving rise to symptoms will not give the desired results. With all the methods of kidney diagnosis, ureteral catheterization, pyleography, functional tests, etc., it can practically always be determined to what extent a kidney is an offending member. Many movable kidneys do not give rise to symptoms and many that do give symptoms are not necessarily operative. But when palliative measures fail to give relief, then operation should be seriously considered.

Many patients seen first by the gynecologist will need, in addition to his services, the services of the dental surgeon, the nose and throat specialist, etc. I am presupposing that this will not be overlooked.

Next in importance to the careful study of the patient and the correction of all conditions that may enter into the case is a thorough follow-up system of after-treatment. Partial or complete failure of what promises to be a successful operation may result from neglect to carry out reconstructive measures. Six months, a year, two years may be required to reap the full benefits of an operation, and many of these patients will need much the same care as purely neurologic patients during this period. It is well to impress upon the patients that it will be a matter of

time. The conscientious gynecologist's responsibility does not end with the successful performance of the operation.

When there is doubt as to the causal relationship between a gynecologic condition or symptom and nervous manifestations, it is better to defer operation for local treatment. When it is definitely determined that operation will be necessary, then it is better to operate early and employ reconstructive measures following operation.

The question of radicalism vs. conservatism also arises. In this class of patients it is undoubtedly better to lean toward radicalism. But here again a careful study of the patient is important. Many women will be much disturbed mentally if menstruation is stopped by hysterectomy, and it will be difficult to convince them that they have not been unsexed. In advocating radicalism, I also wish to make an exception in the case of the ovary which always demands the most careful and conservative treatment, and especially in these nervous patients. When conservation is impossible in younger women ovarian transplant should be tried.

CONCLUSIONS

Many gynecologic conditions are responsible for nervous manifestations, but it is frequently difficult to determine the exact relationship of gynecologic symptoms to the nervous symptoms. Thorough and careful study of the patient is essential and co-operation with the neurologist may be necessary.

If operation or gynecologic treatment is decided upon, careful attention to, and correction of, every condition that may be a factor in the case is important.

Thorough reconstructive treatment following the operation is highly important and may determine the success of the operation in relieving the nervous symptoms.

INDICATIONS FOR THE DECOMPRESSION OPERATION IN FRACTURE OF THE BASE*

By Samuel R. Benedict, M.D.,
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In taking up the subject of the decompression operation in fracture of the base of the skull I shall not confine myself to the operation in itself, but rather to the symptoms which, existing, justify and in fact necessitate this procedure.

First, the mild form in which an operation is not justified. We shall not go into this in detail, but rather over it hurriedly in an effort to draw a line which will be of advantage in determining the question as to when the decompression operation is justified. There may be no symptoms whatsoever except those of a mild concussion. We have all seen these cases the result of seemingly insignificant blows on the head. How many cases of so-called concussion are simple fractures of the base? I dare say a large percentage. No lick of any degree on the head is so insignificant that it does not justify close watching of the patient; and he who plays safe puts the case to bed under observation for forty-eight hours. It is even safe to treat all cases of severe concussion as fracture of the base.

The next class of the mild type is that in which there is bleeding from the ear, nose, posterior pharynx, into the conjunctiva or around the eyeball, or perhaps a general blueness or a blue spot in the mastoid region. Here we may have associated with the bleeding a discharge of cerebral fluid. The reflexes are perhaps exaggerated and a slight engorgement of the retinal veins is often found on examining the eye grounds. A patient in this condition will, in all probability, have vomited and a few minutes after the accident may be very irritable. The blood pressure is not elevated to any degree and the pulse may or may not be increased in rapidity, this, of course, depending upon the amount of shock that exists. Cases of this character are those in which a question arises as to whether or not an operation is justified. A thorough, careful and complete examination only can determine this question. Should a patient with a condition as outlined above in a few hours become mentally clear and should the blood pressure and pulse remain practically normal with no increase in the engorgement of the retinal veins, we may feel reasonably sure that for the time being an operation is not justifiable. However, should this patient's general condition not improve,

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and should he fail to become entirely rational in eight or ten hours with a progressive congestion of the orbital veins, increased reflexes, marked irritability, etc., then the decompression operation should be advised.

It is my opinion that every case of fracture of the base of the skull should have a spinal puncture. The fact that there is blood in the spinal fluid is corroborative proof that a fracture of the base exists; and should this fluid be found under increased tension, it will be of assistance in determining the treatment to be followed. The symptoms as outlined above are not always indicative of the severity of the injury to the brain, as it has frequently developed that the most serious brain injuries have not given the exaggerative symptoms that would be expected. Under these circumstances, as a general rule, in mild cases it has been my practice to wait forty-eight hours and if there is not a marked improvement in the symptoms, to decompress, realizing that the operation will not injure but may be of inestimable value not only in regard to the relief of the present condition, but to the amelioration of later symptoms, such as headache, epilepsy, fainting spells, decreased hearing and intense nervous sequelæ, which often follow accidents of this nature.

A great deal of stress in the past has been laid upon the question of elevation of the systolic blood pressure in these cases. However, before we can reach a definite conclusion in regard to the diagnostic value of this procedure, it will be necessary for us at first to consider other things which may be present to produce an elevated or lowered pressure. The age of the individual injured, as far as blood pressure is concerned, plays an important part, as, for example, in a man of fifty, should we find his blood pressure 160, we could not consider it of the same diagnostic value as we could were the patient in his twenties. Again, we have to take into consideration the effect shock has on producing a low systolic pressure. A patient suffering from a fracture of the base may have a severe injury with a large amount of blood thrown out into the base and yet the blood pressure will not be over 110 or 115. This is due to one of two conditions: either it is associated with shock or it is produced by a hemorrhage resulting from an injury received at the time of the accident other than the fracture of the base. Therefore, it is very essential that we first follow the expectant treatment endeavoring to relieve the patient of shock or to restore the normal amount of blood to the vascular system. This can usually be accomplished in a few hours and then, and not until then, will the systolic pressure be of any real value. In examining a case of this character we have frequently found that the blood pressure and the pulse were practically the same, that is to say both were around 115 or 120. As the shock is gradually relieved the pulse falls to normal and frequently below, while the pulse pressure rises to 150 or higher.

Next, one of the most important things as a means of diagnosis that we have to consider is that of engorgement of the retinal veins. This is unquestionably more to be relied upon than any one diagnostic point in determining the question as to the advisability of an operation. Should, on examination of the eye grounds, the retinal veins be found markedly engorged with an increasing dimness of the nasal margin of the visual field we can feel reasonably sure that the amount of intracranial pressure is so great that a favorable result without a decompression is unlikely. Therefore, in all cases of fracture of the base it is a routine procedure with us not only to take the blood pressure, but also to examine the eye grounds at least every two hours. The findings are charted along with the general mental condition of the patient and with the two-hour temperature, pulse and respiration which is ordered on all cases.

A fracture of the base can not be watched too closely, as complications, when they do arise, are so rapid in their onslaught that the patient when seen is beyond all hope of recovery. As a diagnostic sign the symptoms of hemorrhage or the flowing of cerebral fluid from the organs of special sense are of great value, and one or more of these symptoms are generally found, I should say, in 80 % of fractures of the base. An important point to remember in regard to hemorrhage from the brain is that in which the patient is in a semicomatose condition and at more or less frequent intervals vomits blood. This

condition is almost invariably due to the fact that there is a fracture into the post-pharynx with considerable bleeding, the blood flowing into the stomach and in turn is regurgitated. Unless we remember this point, we might easily be led astray in the diagnosis of this condition, wherein a patient receives not only an injury to the head but to the abdomen.

The question of reflexes is of value in diagnosing fracture of the base, but of more value in determining the side on which the decompression operation should be performed. Exaggerated reflexes such as Babinski, retinal, knee, abdominal, et cetera, are not necessarily indicative of a cerebral hemorrhage, as these are found in concussion or from any irritation to the cerebral cortex. I do not wish to minimize the value of the different reflexes, as I think they should be taken systematically in all cases of fracture of the base. However, their actual value is small unless considered in conjunction with the other symptoms and signs outlined above.

The X-ray also plays an importance in diagnosing fracture of the base, but is not so important as one would generally suppose, for often the X-ray findings are negative when the symptoms of fracture are positive beyond all doubt.

Vomiting in fracture of the base is a very frequent occurrence, but is more the result of a general shake-up of the brain, as in so-called concussion, than from a pathological condition directly resulting from the fracture.

Cases of fracture of the base may show symptoms varying from a mild irritability to one of deep coma, and on this point can be placed a great deal of stress in determining the degree of injury to the brain substance. In those cases wherein the patient becomes rapidly comatose following an injury to the head, Dr. J. B. Murphy emphatically stated that the external carotid should be tied immediately and the decompression operation resorted to in a short time should the coma continue. Dr. Murphy's idea in tieing off the external carotid is that a brain which has been severely compressed for say even ten or fifteen minutes, producing a marked enemia, would never regain its normal function, and that the chances were that a great many cases wherein a rapid and extensive hemorrhage had taken place around the brain died as a result of the enemia produced. These cases he stated could often be saved if the external carotid were tied immediately. "Immediately" with him meant not on arrival at the hospital, but wherever a patient was first seen by the doctor or surgeon.

The treatment in the two forms of fracture of the base, i. e., the mild and severe, are entirely different in some respects and yet the mild at times merges into the severe. Therefore, practically every fracture of the base should be handled, at least a few hours, on the expectant lines of treatment. This, as you know, consists in keeping a patient perfectly quiet, or as near so as possible, in a darkened room and as far away from noise as consistent. Stimulating enemas should be given, and especially is this true where the condition is associated with shock. Personally, the most beneficial results that have been gotten in my cases have been in the use of hot black coffee per rectum, the application of external bodily heat and an ice bag to the head. The question as to whether the ice bag has any effect whatsoever in controlling cerebral hemorrhage is very doubtful. In fact, it is hard to believe that cold applied to the head can penetrate the scalp, skull and intervening tissues to such an extent that it will have any direct effect upon the brain substance itself. However, we use the ice bag not knowing definitely its actual value.

The most important procedure in treating cases of fracture of the base is the thorough cleaning of the ears, nose or throat when a hemorrhage from one of these cavities exists. It has been my practice to use a dilute aqueous solution of iodin in the ear, in the strength approximating the color of sherry wine. This is injected into the external ear with an ear syringe, being especially careful not to have the solution at any time under pressure. This is resorted to three times a day; and following each irrigation the ear is packed lightly with sterile cotton. A bandage is next applied for fear that the patient may remove the cotton plug. The irrigation of the nose and throat are also carried out, but instead of using iodin we have found it best to rely upon a 10 % solution of Argyrol. This is sprayed into

the nose and throat, not blindly but by the use of a head mirror and a nasal speculum. Failure to carry out the above treatment often means meningitis and death. Other treatment necessarily at times has to be used, depending upon the symptoms which exist, but generally speaking the above covers the question of mild fracture of the base.

The patient should remain in bed at least three weeks and after this should have a plaster collar applied which supports the head on the shoulders, relieving any pressure which might be brought to bear by the weight of the head's being supported on the spinal column. This cast should be worn at least two weeks, at which time it can be removed and the patient discharged as cured.

CASE REPORT

J. M., aged 40, married. Occupation, brickmason.

Family History.—Negative.

Past History.—Malaria six years ago. Drank a good deal until two years ago. Denies lues. Perfectly well; working every day.

Present Illness.—Fourteen months ago was hit on the head with a rock weighing about twenty-five pounds. Was unconscious for about ten minutes. On regaining consciousness was weak and faint; could not walk. Remained in bed two days and returned to work in three weeks. No hemorrhage from ears, nose, etc. On returning to work began to suffer from severe headaches; also had blind staggers, and suffered from backache. Four months ago had convulsion which was preceded by severe pain in occipital, frontal and both temporal regions. Vision was impaired and had spots before the eyes; felt cold at times and had a great deal of pain. These spells came on three or four times a day for a month; then convulsions became more severe. Did not bite the tongue. Had involuntary micturition and defecation; attacks lasted longer and mind was not clear at any time.

Physical Examination.—Well nourished man. Head negative except for scar above left ear just off the median line. Tapping over scar does not cause annoyance. Hearing normal. Pupils react to light; marked ptosis of right lid; eye practically closed. Tongue slightly deflected to right. Tremor; mentally sluggish; teeth bad.

Eye Grounds.—Some engorgement of orbital veins; beginning choked disk; reflexes sluggish; co-ordination good.

Feeling of numbness in left arm and leg, some loss of sensation, involuntary micturition. Blood pressure slightly above normal. Repeated X-ray examinations fail to show fracture. Three Wassermanns negative. Urine negative.

Believing that this man's condition resulted primarily from a fracture of the base and also realizing that the intracranial pressure was great, we decided to decompress. After the usual preparation a large horseshoe flap of the scalp about the size of the hand was dissected up over the right subtemporal region. Temporal fascial and muscles divided. Periosteum lifted and a large flap of bone twice the size of a silver dollar removed. The dura was tense and non-pulsating. This was opened by a stellate incision allowing the brain tissue to bulge into the wound. A careful examination failed to locate clots. No great amount of cerebral fluid present. Believing that a mid-brain tumor or a markedly dilated ventricle existed, we passed the needle into the centre of the brain, tapping the right ventricle, 7½ ounces of cerebral fluid being slowly removed. This was only slightly cloudy and otherwise seemed to be normal. As the fluid was slowly withdrawn the brain gradually returned to its normal position and pulsation was noted. The dura was now closed as far as possible with interrupted sutures Same also for temporal muscle and fascial. The bone was not replaced and drainage was not used. The scalp was closed with interrupted sutures of silk. Incision sealed with collodion.

Post-Operative History.—When seen on the following day marked change in expression was noted. Ptosis of right lid gone; both eyes opened equally; mental condition excellent; pulse normal; tongue did not deviate; had control of bowels and bladder; and left side normal to sensation. No convulsions since operation and no headache. Stitches removed on the fifth day. Patient left hospital in one week, stating that he never felt better in his life.

Six weeks later returned. Slight bulging over decompression area. Stated he had had slight headache for past day or two and a touch of vertigo. Without making an incision in the scalp an anesthetic was given and the needle passed into the ventricle, about 3½ ounces of fluid being removed. Patient left hospital following day feeling normal. A week or two later I lost track of this case and have not seen him since.

Whether the continuous tapping of the ventricle at intervals would relieve or cure this man permanently I am unable to say. A puncture of the corpus callosum would probably have given more lasting results.

A LUMP IN THE BREAST*

By E. B. Claybrook, M.D., F.A.C.S.,
Cumberland, Md.

In medicine and surgery, as well as in business, it is necessary that we take an inventory at intervals if we are to know just where we stand and what we have accomplished. The result of such stock-taking is often disappointing and is sometimes disquieting, but is always profitable, if we are willing to look the matter

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squarely in the face and profit by the findings. When we study the statistics of cancer in general, and of cancer of the breast in particular, as evidenced by the reports of the Census Department for the period from 1903 to 1914, inclusive, we find conditions such that we must seriously ask ourselves what is to be done to stem the tide that is so steadily rising.

It is now twenty-two years since Halstead published his technique for the first really radical operation for cancer of the breast. During this time there have been many modifications and improvements in technique, and so much has been added, and so many refinements adopted, that we can hardly expect to lower the mortality rate by any further advances in surgical technique, and are therefore forced to look to the problem of earlier operation if we are to gain that end.

During the period of twelve years from 1903 'till 1914, we find that the general death rate from all diseases has decreased 15.33 %, while the general cancer rate has increased 17 %; the rate for the female genital organs has increased 24 %; that for the stomach and liver is 26 %, and the increase for cancer of the breast is 46.4 %.

During 1914, 8,139 women went to their graves of this disease, in this country. While for this year the general death rate from all causes, as compared with 1913, was lowered 3.33 %, the rate for cancer of the breast was 12.5 % higher than for the previous year. During this year the rate for cancer in general only increased 0.6 %, while the rate for the stomach and liver decreased 2.8 %, and the rate for the peritoneum, intestines and rectum decreased 3.6 %.

We, therefore, see that, in spite of surgical advances and educational propaganda, that we are not even keeping even with the board, but are steadily and progressively losing in our battle with this dread disease.

And the most remarkable part is that cancer of the breast, the location so much preached about and so easily inspected, palpated and examined, is the one that is leading all others and far outstripping our best efforts in spite of the fact that improved technique is curing from 40 to 50 % of the operative cases. We all know that there is a time in the history of every cancer of the breast when operation will completely eradicate it, and 100 % cures looms up as a goal to be attained. We all know that it is primarily a local disease and easily cured if we get it at the right time; and still the death rate marches merrily on. Now, why is this? To my mind, the chief difficulty lies not with the women and not with the family physician, but with our surgical literature and with those responsible for it.

If the general practitioner, and through him the woman, is led to believe that there is a definite clinical picture and course by which cancer, as cancer, can be recognized, we can scarcely blame them if they believe the false teachings of those who are supposed to know what they are talking about. For instance Mumford, in his excellent work on "Surgery," in dealing with cancer of the breast, under the heading of symptoms, mentions as the first three, pain, ulceration and glandular involvement, in the order named. DaCosta's latest edition mentions as the first three symptoms nodularity, immobility and glandular involvement.

As an experiment, to find out what is the average clinical picture arising in the mind of the average doctor when cancer of the breast is mentioned, I polled the membership of our city medical society, an organization composed of good average men in a city of twenty-five thousand. The question was asked, "What are the first three symptoms that suggest themselves to your mind when I mention cancer of the breast?" The answers showed 50 % each for retraction of the nipple and glandular involvement and 37.5 % for pain.

In the examination on surgery of the Virginia State Board last June, the question was asked, "If a woman comes to you with a lump in her breast, can you tell whether it is benign or malignant? If so, how?" Tabulation of the answers of ninety-five men, recent graduates of some eight or ten different colleges, and all of them, theoretically if not practically, up to the minute on recent cancer teachings, shows that the three leading diagnostic points by which differentia-

tion may be made were: first, age above forty; second, glandular involvement; and third, retraction of the nipples. The percentage of the answers giving these were respectively: 62, 40 and 32, which leads one to believe that the teaching is the same in the colleges as in the surgical literature.

The same principle applies exactly as applies to the literature of tuberculosis as so vividly expressed in a paper read before this association in Dallas by Dr. Sam E. Thompson, of Carlsbad, Tex., entitled "Common Sense and the Fever Thermometer vs. the Microscope and the Stethoscope in the Early Diagnosis of Pulmonary Tuberculosis." If one is to diagnose tuberculosis early, then the stethoscope and the microscope should not be depended upon as absolute differentiation. If one is to diagnose cancer early, he must first realize that there are no early symptoms of cancer, except a lump. That is all—a lump in the breast. If it is fixed, if there is pain, if there is glandular involvement, if there is retracted nipple or ulceration, of course the diagnosis is easy, but the doom of the patient is already sealed. While these stages of cancer are of interest from a pathological viewpoint, they have no place in the literature of surgery if we are to get anywhere. Cancer must be gotten by the surgeon in its beginning, and just here is the difficult problem.

It is rather remarkable that when we get right down to the bare truth even the pathologists are far from able to say just what is cancer of the breast, and just where it has its beginnings. The literature shows that there are one hundred and forty-seven different terms that are used to express pathological mammary conditions in which there is epithelial hyperactivity. Who would not get lost in such a maze? McCarthy, of Rochester, Minn., says: "The dogmatism relative to the which, the very indefinite basement membrane has played, in being the histological arbitrary line of demarkation between malignant and benign conditions, has often retarded surgical radicalism, which is with our present knowledge absolutely necessary in the treatment of cancer." He follows this up with the following: "Where to draw the line between the hyperplastic changes of chronic cystic mastitis and the pictures which are definitely carcinoma is beyond the writer's present knowledge."

Bloodgood, in an address before the Western Surgical Society, in Des Moines, December 18, 1916, said: "I have submitted over sixty borderline cases to a number of pathologists and have found that in not a single case has there been uniform agreement. I have selected these cases from among the lesions, which I have called benign, fibro-adenoma, cystic adenoma and benign papillomatous cysts, chronic mastitis and the types of early adeno-carcinoma in chronic mastitis, in cystic adenoma and in papillomatous cysts. If I took one group of pathologists I could class them all as malignant, and another group would allow me to report them benign."

When he acknowledged this before a surgical society I can not see how he brings himself to say in a pamphlet intended to be distributed to women in the educational campaign entitled "What Every Woman Should Know About the Breast:" "At operation for such a lump, the surgeon must be prepared to distinguish the lump that is cancer from the one that is not. The surgeon must make this decision at once, and if the lump is not cancer he removes the lump. If it is certainly cancer, or is doubtful, the breast, and in most cases more than the breast, must be removed."

I do not believe that such educational sayings as this, from one who is counted as an authority in this country, can possibly do anything but harm. Why create the idea in the minds of suffering women that the differentiation is such a simple matter that it may and must be done out of hand without a moment's consideration, when it is acknowledged that it is almost impossible at times for the most accomplished pathologists to say just which specimen is cancer and which is not?

Hyperplasia of the breast epithelium, as shown under the microscope, can easily be divided into three types, which have been called primary, secondary and tertiary or migratory epithelial hyperplasia.

In the first there are marked increases in the cells of the basement membrane

and of the cells of the germinative layer next to the basement membrane, while the differentiated secretory cells remain unchanged.

In the secondary form the irritation has caused such rapid reproduction of the embryonal germinative layer that they have been pushed out into the acinus so fast that there is not complete development into differentiated cells, and we see only a thickened basement membrane surrounding a mass of embryonal cells.

In the tertiary form the embryonal cells have reproduced so fast that they have overflowed into the surrounding tissues and have broken down the basement membrane and are said to be migrating, and at this stage the condition is generally acknowledged by the pathologists to be carcinoma. But why should we draw the line at the breaking down of the basement membrane? Why is not the secondary form in which there are no fully developed cells present just as truly carcinoma? I must confess that there seems to be no reason, as far as I can see, to back up the assertion that it is not.

Now, in the encapsulated growths of the breast, usually classed as benign, as adenomata, adeno-fibromata, fibro-adenomata and cysts, we may find epithelial hyperplasia in all of its three stages; and in the non-encapsulated chronic mastitis all the forms of hyperplasia are often found in the same microscopic field.

Abnormal involution, cystadenoma, chronic mastitis and senile parenchymatous hypertrophy are often, if not always, associated with carcinoma, according to McCarthy.

When this is the case, what can we say as to what is and what is not cancer?

Who can say when, in any growth, that down somewhere in its deep recesses the process of spilling over of embryonal cells is not beginning and potential cancer being inaugurated? Cancer in its beginnings is essentially microscopical, and the place of starting may be so small that we may make a hundred sections and miss the fatal, vital spot.

And yet this is the stage at which we must get it, if we are to cure from 95 to 100 % as we should. We are being taught wrong, and we are so profoundly scientific these days that we are not willing to cut this Gordian knot, but must, forsooth, sit us down and attempt to tease it out.

A. Hopkins Thwaites, of Melbourne, visited this country about two years ago for research work in cancer for the University of Melbourne and the Australian Government. After viewing the subject from all angles, he came to this conclusion: "Recognizing the present chaotic conditions, it seems to me that the indications are strongly in favor of a standardization of teachers and of things to be taught."

In its beginnings there are no symptoms of cancer except a lump, and we should cease to expect other symptoms because when others appear, due to advancing pathology, the patient's chances have already all been jeopardized. Therefore, while the title of this paper is necessarily unscientific, it is essentially practical.

What are you going to say to the woman that comes to you with a lump in the breast? Upon the answer to this question hangs the whole cancer problem. Is it fair to the woman and fair to humanity to create the impression that it can be safely differentiated when we know that with all our advances, with all our science and with all our vaunted surgical skill, we are not even keeping abreast of the disease, but are steadily losing ground? Is it fair to the woman even to temporize when we know that 95 % of all tumors of the breast are potentially cancer, if they are not already actively so?

McCarthy, in a recent paper, said: "The question for the surgeon to decide is whether he is willing to run the chance of local recurrence, after wide removal of a malignant growth followed by extensive operation following microscopic examination; or take the credit of doing radical operations unnecessarily in the attempt toward conservatism."

And I am here today advocating that we sieze the latter horn of this dilemma. I believe that while all our efforts toward differentiation should be increased as far as possible, until some better way offers, we have no right to pretend to ourselves and to our patients that a safe diagnosis is possible, because it is a sham and a delusion, as the statistics amply prove.

We should say to all men and all people, and have the courage to act upon it, that

all lumps in the breast are potentially, if not actually malignant, and the breast should be sacrificed and the axilla cleaned out regardless of sentimental considerations as to diagnosis and the loss of the breast. If we will do this, it will not be long before our cancer statistics will be different, and the woman with a lump in her breast will not hide it from her friends and from her doctor, but will come and have it out just as she has been educated to do in the case of her appendix.

61 *Washington Street.*

DISCUSSION

Dr. Stuart McGuire, Richmond, Va.—The average woman believes that cancer is hereditary and hence its occurrence is a stigma on a family. She knows of many cases in which cancer has been fatal and is ignorant of any case where a cure has been effected. Therefore, she thinks cancer is hopeless. She reasons that if cancer is a disgrace and if cancer is hopeless, then if she has cancer she should hide it. If a woman is driven by necessity to seek surgical relief for cancer she enters a hospital with the greatest secrecy and confides the nature of her trouble to the surgeon under the seal of professional confidence. If she is operated upon and cured, no one ever knows the nature of her disease. If she is operated upon and there is recurrence, she dies at home after a long and painful illness the character of which eventually becomes widely known.

The reason cancer is considered a disgrace is because of the belief in its tendency to develop in succeeding generations. The reason cancer is considered hopeless is because the cures are concealed and the failures revealed.

The general practitioner has been taught the importance of the early diagnosis and the proper treatment of cancer. A campaign of education is now in operation to teach the same truths to the laity. This movement has done a great deal of good. It has also done a great deal of harm. I can tell by the patients who come to my office when a speaker has made a poular talk in my neighborhood on cancer. Some of the patients have cancer; some have benign growths; some have simple mastitis; but most of them have only cancerphobia.

With real disease the line of treatment is plain, but it is difficult and sometimes impossible to minister to a mind diseased.

If a patient has cancer of the breast a radical amputation should be done. If she has a benign tumor it should be enucleated. I have tried Warren's method, but don't like it. If there is any doubt as to the nature of the growth I have a frozen section made while the patient is on the table. I have the greatest confidence in this procedure in the hands of a competent man. A good pathologist is the surgeon's best friend. A poor pathologist is a dangerous nuisance. I have fortunately the services of a very competent man. I have never had occasion to reverse the diagnosis he made for me by the frozen section method.

Chronic mastitis is a disease that often perplexes me. I believe we had better either treat the condition non-surgically or else remove the breast. Incomplete operations do more harm than good.

Patients with nothing the matter with the breast but with pathologic imaginations are subjects for the psychiatrists.

Dr. F. Webb Griffith, Asheville, N. C.—I do not think this Section ought to go on record as believing that every lump means a radical operation. We had a discussion yesterday, as you recall, on the question of fibroids, and I think we decided some should be removed and some should not. Of course, in the breast every tumor should be removed. It isn't a question of whether we should or should not remove a tumor. That, I think, every one admits. But I think it is entirely too strong to say we shall have a radical operation for a mere tumor of the breast. It looks too much like empiricism to take off the whole breast for every tumor. If we do not try to decide which is malignant and which is not, we shall never progress. In every doubtful case I agree with the doctor that we should remove the breast. But we all see the small fibroids that are absolutely benign, so far as any human element or the microscope can show. Borderline cases should have radical operations, because there is some grave doubt about their being benign; but I do not think that every lump, simply because it is a lump, should be subjected to a radical operation.

Dr. Louis Frank, Louisville, Ky.—I also desire to speak of another thing in connection with the removal of tumors of the breast, i. e., microscopical examinations, also spoken of by Dr. McGuire. I think if there is any question of doubt as to the program to carry out a removal of a portion of the grouth should be done for microscopic section. This is not done with the knife, but with the actual cautery, which seals up the lymphatics behind and prevents diffusion. I think it is a perfectly legitimate procedure and should be carried out.

Some of these cases have had recurrences, but I do not think they are any greater than we would have had in any other way.

Another thing; that is the microscopic examination and checking up of the tumor after its removal. It is of just as much importance to the patients as is the diagnosis beforehand. The lymphatics removed should be examined and the diagnosis be either confirmed or reversed, and if reversed, the patient should be made aware of it. And also in all suspicious growths where the breast has been removed, with a possible diagnosis of carcinoma, if we find we are mistaken, the patient should be made aware of it. I tell them the truth. We tell them what we think and if we are wrong we let them know it. It is a terrible thing to have the possibility of recurrent cancer hanging over one. This can all be cleared up by examination under the microscope after operation.

Dr. W. W. Crawford, Hattiesburg, Miss.—It is

my impression that one of the most important points to be developed in connection with the discussion of tumors of the breast is the question of publicity.

As suggested by the essayist, the cancer that is pictured to us by the text-book represents an advanced type of the disease—one in which even the most liberal prognosis must forecast an early recurrence.

Most of us have a clear conception of our duty as surgeons when a patient with a neoplasm comes to us. The important thing is not merely that the internist refer the case to the surgeon as he sees it, but what is more significant, the laity must be impressed with the fact that every growth in the breast may be potentially cancer and that it is only through early interference that the frightful mortality of cancer can be minimized.

Much has been done by the profession in disseminating information on this subject during recent years, and in this connection I wish to offer a testimonial to the activity of the late Dr. Rodman. Those of you who attended the Richmond meeting two years ago no doubt heard his masterly address on cancer. Some six months later a doctor's wife consulted me in regard to a lump in her breast. Both she and her husband had been conscious of its existence for a number of years and the husband had repeatedly importuned her to have it removed, but it was not until she had read Dr. Rodman's address in THE JOURNAL that she consented to have an operation. In the meantime the benign growth had become malignant and a radical operation was necessary.

Dr. W. T. Black, Memphis, Tenn.—I think it is the wrong impression to leave with this Society the idea of removing all breasts for lumps. We were formerly taught that 85 % of these cases were malignant when they first consulted the physician, and that 7.5 % later became malignant. But owing to the fact that women are becoming better educated they are seeking aid earlier in regard to lumps in the breast and the percentage has been very much reduced from 85 % malignancy. Consequently, we know a great number of these women have benign growths — a much larger number than we formerly thought, and it would be a serious mistake to remove the entire breast for these benign conditions.

Dr. Claybrook.—Dr. McGuire says that if we have a competent pathologist that we can be guided by his findings. But the question arises as to who is a competent pathologist? When such an one as McCarthy says that in certain cases he feels that it is beyond his power to judge, where can the rank and file expect to get one to whom they can pin their faith?

In answer io the other criticisms I will just tell you a little tale. Not very long ago I was called in consultation to see a tuberculous patient with a small lump the size of a pecan in the breast. I advised immediate radical operation, but as she had an uncle who is a doctor living in Illinois near Chicago, she went there to see what he thought about it.

He took her in to Michael Reese Hospital in the service of Dr. E. Willys Andrews, whose ability as a surgeon none of us may question. He removed the lump and had it examined in a frozen section and later confirmed the finding from a fixed specimen. It was reported by the pathologist as a peri-canalicular adeno-fibroma, and certainly benign. This pathologist could not hold his position if he were not counted as an able man.

Eighteen months later, after she had returned from a stay at a tuberculosis sanitarium, I was again called in consultation and found a small nodule about the size of a hazlenut just under a small scar which marked the site of the former operation.

I again urged a thorough removal, but without my knowledge she went down to consult the tuberculosis doctor as to the advisability of operation. He being a Hopkins man, did not send her back to me, but sent her to Dr. Finney, whom you must all agree is certainly a most able surgeon. Dr. Finney examined her thoroughly and told her to return in two months for another examination, which she did. At that time he did a most thorough and complete operation, cleaning out the axilla radically. In four and a half months she was dead with cancer en cuirasse.

This is not an isolated case; there are hundreds of them in this country today.

AUTHORS' ABSTRACTS

Surgery, Gynecology, Obstetrics and Genito-Urinary Diseases.

The Management of Cleft Palate. H. Horace Grant, Louisville, Ky. Mississippi Valley Medical Journal, Vol. 24, No. 7, p. 209.

To be successful operations for cleft palate must be done by specially experienced hands upon the otherwise healthy with good hospital surroundings and competent assistants and capable anesthetist. For practical purposes four forms of cleft palate are considered: (1) Those involving the cleft palate only; (2) those involving the soft palate and more or less the hard palate; (3) those in which the cleft extends completely through the alveolar border in front; and (4) those with the double cleft and a protruding maxillary bone. For these four forms practically three different steps are described. In the third and fourth forms the principles of the Brophy operation, done about the sixth to tenth week after birth, are to be applied. In this the displaced pre-maxillary bone is forcibly restored, the edges of all the bone cleft pared and by strong wires passed through the alveolar border above the palate vault, the edges of the cleft are held after being forced together by external pressure. After two weeks the replacement is found to be firm and the wires are removed. This step largely closes the cleft. In the second form and in those clefts incompletely closed by the above steps, the muco-periosteal roof of the palate arch is freely separated from the bone by a periosteal hoe well back from the cleft to the alveolar border, the edges of the cleft well freshened and, after properly placed lead plates, armed with silver wires have approximated the edges and relieved tension, union is made with horse hair suture, over which the silver wires are twisted together.

In the first form edges of the cleft are fresh-

ened, the tension is relieved by the lead plates, and silver wires; and union provided for by horse hair sutures. The important details are: first, relaxation of all tension by freeing the parts from the bone; secondly, the broad apposition of the freshened surfaces without tension; third, the support of the flaps by the lead plates; fourth, conservation of the blood supply; and fifthly, gentle manipulation.

Heliotheraphy in the Treatment of Tuberculosis. A. G. Shortle, Albuquerque, New Mexico. Southwestern Medicine, Vol. 1, No. 2, February, 1917, p. 30.

The author briefly reviews the history of the sun-bath treatment and gives the theories of its action that have been most widely accepted. He also gives a resume of the results obtained by European physicians, including the translation of a recent chart by Rollier covering 1,129 cases. This chart shows remarkable results in many of the surgical forms of tuberculosis. The importance of pigmentation is dwelt upon, as is the influence of altitude due to the greater intensity of the sun's rays and the fact that at sea level 25 to 30 % of the infra-red and ultra-violet rays are absorbed, while at the top of Mont Blanc it amounts to only 6 %. The author began the use of solarization early in 1912, but owing to the fact that his sanatorium is conducted primarily to treat the pulmonary form of tuberculosis, he has not had a great number of surgical types. With these, however, he claims most excellent results and reports a list of typical cases. He points out the particularly favorable climatic conditions of Albuquerque and New Mexico in general for carrying out the treatment due to the almost constant sunshine and high altitude. He appends a fairly complete bibliography covering the subject.

Overlooked Common Duct Stones. Daniel N. Eisensdrath, Chicago, Ill. The Journal of the American Medical Association, Vol. LXVIII, No. 13, March 31, 1917, p. 968.

In the present article attention is directed to the fact that one can easily overlook common duct calculi if too much reliance is placed upon palpation and the clinical history. About 20 % of all cases of common duct calculi there is no history of either chills, icterus or fever, in fact nothing pointing to the existence of any infection of the common, hepatic or intrahepatic ducts. Kehr, who is quoted by the author, found calculi in the common duct in 46 % of the thirty-six cases in which palpation of the common duct was negative. In ten out of thirty of the author's cases in which the common duct was opened upon certain indications, calculi were found either in the common or hepatic ducts or both when palpation had been negative. This is explained by the fact that the calculi lie just above the ampulla in thick bile and thus escape detection by the method of palpating the supraduodenal portion of the common duct.

One should invariably open the duct if the patient's condition will permit. Of the four indications given by Kehr, three have seemed of especial importance, in the order named: (1) the presence of many small calculi in the gall-bladder or cystic duct; (2) an enlarged, thick walled common duct; (3) the presence of chills, fever or icterus. To these he would add a fourth: recurrence of pain or symptoms of cholangeitis (chills, fever, etc.) after previous choledochostomies.

Some of the cases of recurrence after cholecystectomy with or without drainage of the common duct may be explained by the formation of calculi within the liver itself, a condition which existed in two of the author's cases. His technic employed in opening the common duct will appear in a second paper.

His oenclusions are as follows:

1. In 20 % of cases of calculi in the hepatic and common ducts, either no symptoms indicative of their presence are found or they are overshadowed by those of an accompanying gall-bladder condition.

2. In the past four years calculi have been found at the lower end of the common duct in ten of thirty cases in which palpation was negative.

3. Exploration of the common duct does not increase the mortality, and should be done whenever one of the indications given above is present.

4. Recurrence following operations on the gall-bladder and common duct may be due to overlooked or newly found calculi in the intrahepatic bile passage.

A New Method of Acidosis Therapy: Blood Transfusion from an Alkalinized Donor, with Report of Case. Alexander O. Gettler and Edward Lindeman, New York, N. Y. The Journal of the American Medical Association, Vol. LXVIII., No. 8, February 24, 1917, p. 594.

Metabolism is first discussed, as to origin of acid-forming substances, together with the means the normal organism has of counteracting these, so as to maintain a constant slightly alkaline blood and tissue reaction.

Three experiments upon three healthy individuals are then cited, showing that it is possible to raise the alkalinity of blood greatly by giving bicarbonate solution at hourly intervals.

Tabulated results of one of these experiments:

CASE II.—F. K.

Time of Blood Taking	H ion PH	Alkaline reserve vol.%	Bases present as chlorids in 100 c. c. blood
Before first dose	7.56	54.	832 mgs.
20 min. after 4th dose	7.72	89.	853 "
40 min. after 4th dose	7.68	91.	910 "
70 min. after 4th dose	7.62	85.	846 "
Next morning after doses	7.60	77.	795 "

The results show that such blood is most highly alkalinized 30 minutes after a dose.

A case is cited (acidosis and pregnancy) in which the ordinary method of treatment, bicarbonate feeding, injection and irrigation, failed to respond. Syringe transfusion by the Lindeman method, with an alkalinized donor, was then

(Continued on page 817)

MILITARY, RAILWAY AND EMERGENCY SURGERY

WHAT THE EUROPEAN WAR HAS TAUGHT US IN THE TREATMENT OF WOUNDS*

By W. L. Brown, M.D., F.A.C.S.,
El Paso, Tex.

It appears that we are still too close to the European War and engulfed in too many voluminous reports regarding the surgery of the present war to draw any very definite conclusions as to the methods of treating wounds that will be permanent additions to our surgical armamentarium. This may be readily understood when we hear the statement made by Fauntleroy that "there have been close to thirty million men actively engaged in this great carnage of the nations, and out of this stupendous number there are at present eighty-odd thousand physicians whose work and observations extend over a battle front of many thousands of miles, and under many varying conditions."

We must all agree that the character of the wounds in the present war, and the surroundings in which they have occurred, have been totally different from anything the world has ever known before. It has been an underground warfare in a country that has been cultivated and fertilized with animal and human excreta for centuries, in many localities where there is a very large rainfall, and the men have lived in trenches, subject to depressing influences of improper facilities for preparation of diet, suffering from cold and exposure, and their clothing thoroughly saturated with mud and dirt of the most infectious character, so that almost every wound has been an infected one. In addition to this, the character of the warfare has been such that they have had to remain uncared for, sometimes as long as twenty-four to thirty-six hours, remaining exactly as they were when they fell.

Nearly all of these infections are from fecal matter, either human or animal producing the bacillus aerogenes capsulatus, streptococcus, bacillus proteus, bacillus coli, bacillus tetanus, and the various bacilli of the gas-forming family.

The experience gained by the English military surgeons in the South African and Balkan Wars, where the battles were fought in sparsely settled districts, above ground where infection was not universal and the wounds caused by entirely different character of weapon, left them poorly prepared for the undreamed-of conditions which the present war developed.

Surgeon-General Sir Anthony Bowlby, of the English Army, states that "the so-called 'normal' bullet wound, such as was common in the South African War, was characterized by a tiny aperture which might have been made by a gimlet or trocar, and is in this war quite rare. And even if the entry is of this nature the exit is almost always ragged and large."

One of the important lessons taught in the present war is that the ordinary First Aid packet, as was in common use in the English and French Armies, as well as our own, are of no value.

Practically all of the bullet wounds in this war are inflicted at very close range, and they show a much greater destruction of tissues and result in larger wounds, quite different from any heretofore experienced. Many of the wounds are due to other missiles, shells and hand grenades. These wounds are large, multiple, and so destructive of tissue that the small First Aid packet formerly instituted for the simple penetrating wounds of the rifle at long range is entirely inefficient. And in addition to this, it is impracticable for the soldier's clothing to be removed in the trenches sufficiently to find the wounds and make the applications from these packets.

The two subjects about which there has been probably the most contention have been the use of chemical antiseptics and the early treatment of abdominal wounds. There have been two distinct schools in

*Read before First Annual Meeting of Texas Railway Surgeons' Association, Dallas, Tex., May 7, 1917.

regard to the use of antiseptics, Sir Almroth Wright being the leader of the school opposed to the use of chemical antiseptics; the other school being represented more or less by such men as Carrel, Sir Watson Cheyne, Tuffier, and Sir Anthony Bowlby.

Wright has advocated leaving the destruction of the infection to the protective processes of the body, to increase the latter especially by the use of irrigation of the wound with hypertonic salt solution, that is, 5%.

As nearly as I am able to gather, I think that it is quite safe to say that among those of the greatest experience at the front, chemical antiseptics are greatly in the lead at the present time. All sorts of antiseptics and special preparations have been advocated, including liquids, pastes, gases, etc., but probably that most generally favored is the method of Carrel and Dakin in the use of hypochlorite solution.

To get results from this method, the treatment must begin at the earliest moment, and it has been conclusively proven that wounds may be rendered aseptic sometimes in as short a period as two or three days and be closed.

The method most usually employed in the application of Dakin's solution is to open up the wounds carefully, remove all foreign bodies and splintered bone as far as possible, leave the wound wide open and pack very lightly with gauze around numerous perforated rubber tubes which are left projecting entirely outside the dressing, and into which is poured at frequent intervals, or allowed to run by the drop method, Dakin's solution. It is perfectly feasible to keep up this line of treatment during the transportation of the patient to the base hospital.

One of the greatest advances in wound treatment has been the opportunity given the laboratory man to be present and keep a complete check on the bacteriology of these wounds.

Prior to this war there had grown up quite a school of army surgeons who advocated the non-interference treatment of gun shots of the abdomen. Even during the year 1914, according to Tuffier, the policy of non-interference seemed to have gained ground, for the conditions of the Medical Service were such that intervention had little chance to succeed. Now, on the contrary, rapid evacuation and the improvement of the front line dispositions have resulted in very marked progress and in the cure of very many abdominal wounds. He also admits that "waiting is excusable where the personnel is such that a laparotomy under favorable circumstances is impossible." Why or how this idea ever grew, of course, not being an Army surgeon, I don't know. I suspect strongly, however, that it was due to the uniformly bad results that were obtained from surgical interference under favorable surroundings by men little experienced in that line of work. I do not know this to be a fact, but strongly surmise that the necessary system prevalent in all armies of having operative work centralized and done by few, in the time of peace, had a tendency to leave a large percentage of the medical officers without sufficient actual experience when emergency or battle came, and were all put into a position where of necessity they were required to take care of this class of injuries. At El Paso, during the year from January, 1916, 'till January, 1917, there were performed in the base hospital almost 1,500 operations. During that year there were centralized in the immediate vicinity of El Paso several hundred Army surgeons, but while we are on a war footing, the operations have been on a peace basis, and the consequence was that during the past year the entire 1,500 operations were performed practically by one man. Therefore, I have a strong feeling that this is one of the weaknesses of the system and that when these other 200 men are put on the line we can not expect them to get the results the civil surgeon, accustomed to operate every day, would get under the same circumstances.

To my mind, waiting or any form of procrastination in gun shot wounds of the abdomen longer than is absolutely necessary to get the patient to a place where an operation can be performed, is unsurgical.

In the hands of the surgeon who has been accustomed to operate every day, I think a man's chances are greatly increased if he can have an operation where only a pocket case, needle and thread and

iodin are available, even if this has to be done in the open air or in a tent.

Sir George H. Macons, Surgeon-General of the English Army, in the *Journal of the Royal Army Medical Corps*, January, 1916, states that "there is but little evidence that wounds of the small intestine ever heal spontaneously, and that post-mortem evidence of healed wounds of the small intestine are wanting." Of course, wounds of the large intestine and rectum, we all realize, may get well without operative interference.

One of the two great curses of the European wounded has been practically eliminated, that is, tetanus, by the adoption of the routine method of giving the serum to every wounded man as part of his First Aid dressing. The other curse is that of gas bacillus infection, which is being greatly reduced by continuous applications of antiseptics, beginning at the earliest possible moment, even from the time of the first dressing and during the transportation of the patient to the base hospital. It has been found that the avoidance of gas bacillus infection has been in direct ratio to the earliness of the application of the antiseptic treatment. Gas bacillus infection in the earlier part of the war was almost a scourge and the latest reports indicate that it has been greatly reduced.

Early and free incision, excision of the parts devitalized by the missile, removal of foreign bodies, extraction of bone splinters, and continuous chemical disinfection have reduced the complications from gas gangrene 95% (Tuffier).

The use of the X-ray as a diagnostic method, in the location and extent of gas bacillus infection, has proven to be of great service, especially so in the subfascial forms of gas infection, which show no external signs, as is the case in the superficial forms.

I want to pass around some pictures here, and you will notice in some of these pictures, X-rays of gas bacillus infection, that the infection invariably began at the point where the bullet or missile was lodged. Here is one picture in particular. You will notice here is the bullet and there is the blur of gas bacillus infection around that bullet. That is important, because if that case is to be submitted to surgical interference, the X-ray shows how far the infection has gone, and what will be necessary to be done, and, in a way, save opening up other tissues for further infection. In addition to the X-ray's showing the gas bacillus infection, it is also of great importance in showing the course of the gas bacillus infection when it is beneath the fascia. The crepitation that is ordinarily characteristic is not present as it is when gas is under the superficial tissues. Here is another picture with the bullet very close to the knee joint, showing the gas bacillus infection beginning. Here is another, with a diagnosis of gas bacillus infection, bearing on the question of differential diagnosis as between gas bacillus infection of the thigh and extravasation of gas from an injured intestine, — that is, where there has been an injured intestine and the gas has gone into the tissue following the bullet wound.

The sera and preventive vaccines which have been investigated have not as yet proved of value against gas gangrene or the other severe infections whether applied generally or locally. That was one of the disappointments they had; they failed to immunize many of these people against these severe infections.

I wish to say that the pictures I have exhibited here were taken in the Murphy Unit in England and were lent me by Dr. Hilton, of our city, who was a member of the Unit.

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SOME FACTORS IN RAILWAY SANITATION*

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For five years I have been intensely in-

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terested in the problem of railway sanitation; and, looking back, it is most gratifying to note the changes which have taken place, each a step toward the establishment of better methods and improved conditions.

The factors of this problem are the traveling public, the railroad corporation, and the health of those concerned, which include not only the traveler but the public as well.

Since becoming State Health Officer of Louisiana, my traveling average has been about 50,000 miles a year. The experience includes all sorts of conveyances from the log train on the narrow gauge to the Twentieth Century Flyer. I think I know as well as any railroad man the attitude of mind, the manners and customs of all the classes who "trip" for pleasure, business or health from one point to another. In the main it is a good-humored "bunch," and there are some who are really appreciative of the efforts made for their comfort. This is not a large contingent, the majority being minded to criticise the "railroad" if there is anything of which complaint may be made. The company is to most people a soulless thing organized to make money, to take from the individual all it can get with as little return in service as possible. Many regulations, necessary and logical because of the nature of the business, are wilfully misunderstood or thoughtlessly condemned. There are increasingly fewer of this type, and with increasing perfection in railway equipment, service and conveniences, their number will grow less and less. In Louisiana this critical attitude has changed greatly because of generous rulings on the part of the railroads in many things which have directly affected community life. There is the growing feeling that the railroad corporation means to be of service, that it is not wholly selfish and arbitrary. I suppose this is true elsewhere.

I think that the contingents of the traveling public most difficult to deal with are the ignorant and careless. These persons who, not knowing any of the difficulties of keeping cars clean and acting under the same impulses which usually control them, add with every mile traveled and with every convenience used, to the sanitary and hygienic burden of the railroad authorities. There is no hope for betterment here except through education, and the railroad itself has a most excellent opportunity to become the teacher. If at the country station the company builds a sanitary closet and keeps it in good order, it gives a concrete lesson in rural sanitation. If the closet is locked, so much the better, provided the key is available and the place kept in the best possible order. If the agent supervises the cleaning of the waiting rooms and his office and keeps them really in good condition, no better illustration of sanitation can be had. I regret that in many places these two features are sadly neglected, but in many others the work is well done and the example a force for good.

The traveling multitude, while difficult to deal with, is not wholly impossible. It can be taught to use the spittoon, to refrain from throwing waste on the floor, to carry its own cup, to ask for the closet key, but it can not be taught some other things. They must come from training and instruction. Therefore, for a generation yet we shall have with us, always, some who are impossible in some respects.

The railroad company, in things sanitary, is in the hands of its employees. Many of these haven't high standards of service. Some in charge haven't sufficient help and equipment to do things according to sanitary regulations, and some are too overcrowded with duties to give much attention to the details of supervision. I believe these are the main reasons why many waiting rooms and offices, and the average day coach, are far below the standard in cleanliness. A porter in the station sprinkles the floor, gives it a few "swipes" with the broom, flourishes a feather duster, and he is through. Floors are never, or rarely, mopped, windows cleaned once or twice a year; the odor of closets disguised, for a time, with disinfectants or a bucket of lime, and there the cleaning ends. I believe the companies pay enough in many places for service, but the standards are low and generally the work not supervised, and therefore, not well done. I think one of the most needed of all improvements is a closer watch as to the condition of the average station, both in large and small places, and a

greater demand on the help that the work be well done.

Pullman, dining cars and day coaches of the main lines are kept in excellent order. The cleaning at terminals is all that can be desired, but the cars of branch roads and many local trains are far from what they should be.

I believe the more care exercised to keep cars, stations and conveniences clean, the greater the protection to health. Dirt may not be the cause of many communicable diseases, but dirt is a transmitting agent. If it were possible to have the hands and clothes of every person traveling really clean, the danger of transmission of some diseases would be negligible. If it were possible to have every person suffering with tuberculosis as careful as he should be, there would be little danger of his spreading the infection on trains or elsewhere. But until these principles of hygiene are understood and practiced, there will remain the possibility of transmission of contagious diseases in any place where there is contact.

The railway regulations now in effect in Louisiana provide against the spread of communicable diseases on trains as completely as regulations may. Their enforcement depends upon those who have the responsibility. If they are not dependable, then the public and the railroads suffer the consequences.

The regulations were drawn up by our Board, submitted to a committee of representatives of eleven branch lines and referred by this body to a committee selected by them. A few changes were suggested and with these amendments the regulations were made a part of our Sanitary Code. We have had the cordial support of the railroad authorities in all our demands and we appreciate most heartily their co-operation.

The question of screening day coaches has come up at various times. It is a peculiarly difficult matter to settle. Undoubtedly, in certain sections, passengers suffer great inconveniences in unscreened cars. This is generally at terminals and for a few hours after leaving while the cars are still infested with mosquitoes. If the day coaches were screened, it would not mean that there would be no inconvenience. Even in Pullmans leaving cities like Brunswick, Savannah, New Orleans, or Mobile, in the mosquito season, these pests can not wholly be kept out. In much greater numbers would they be found in the ordinary day coach. I find in our own Board of Health cars, once in, it is most difficult to get them out. I also find that it is well-nigh impossible to keep the outer doors shut and the screens down. At stations, persons, otherwise intelligent, will insist upon raising the screen of the window. They seem not to realize that an open window may cause inconvenience during an entire night. Because of these habits of carelessness of people generally and the problem of control of the raising of screens in day coaches, it seems to me, the comfort derived from screens would be questionable and not commensurate with the expense involved. However, if it were done and care were taken to prevent ingress of mosquitoes at places where the cars are parked, or trains made up, and the screens fastened, it might not be long before the situation would become acceptable.

Conditions vary to such an extent along even one trunk line it would seem that matters of this kind should be regulated by the Public Health Service just as supplies of water and ice are now regulated. The expense of screening, practicability of the effectiveness of the plan and results as to complete prevention of ingress of mosquitoes, should be the points passed upon. The practical results, taking into account the present attitude of the public, and the claims of the three interests involved, should have careful and unbiased consideration. While not so large a sanitation problem as many others which are awaiting solution, it is of sufficient import to receive attention and should be handled as if it involved the expenditure of millions. The menace to health is an element, remote it may be, yet conditions might be such that the danger would be imminent, and this should not be lost sight of.

A high standard of sanitary excellence implies systematic, persistent effort with, perhaps, for many years, increased expenditure. It means that problems of the disposal of waste and more satisfactory systems of ventilation must be worked out, together with many minor things which

as yet are unsatisfactory. It implies education in hygiene for many persons who are ignorant of even the fundamentals of right habits of living and a more widespread appreciation of the difficulties incident to the comfort and protection of the traveler.

The improvements made within twenty years give promise that railroad authorities are ready to do whatever is pointed out as practical and necessary and to go even a step in advance. It is to their interest to please and to safeguard the traveler in every possible way and to consider every reasonable demand submitted.

If I had the opportunity today to make one request, it would be that those who have supervision of the cleaning of all stations, cars, offices and closets, be required to have this work well done and that they be given the privilege of discharging porters or others who fail to keep these rooms, cars or buildings really clean.

DISCUSSION

Dr. E. Denegre Martin, New Orleans, La.—Eight years ago we had very little sanitation in Louisiana. Since Dr. Dowling has been President of the Board we have had a great deal. He has consulted the railroads and gone over new matter with them, and whenever any new legislation was promulgated it was accepted by the railroads. The railroads are willing to accept new regulations provided they are uniform and do not have to make different regulations for different states.

Dr. A. E. Campbell, Chicago, Ill.—Dr. Dowling dwelt at length on cleaning up of all depots and toilets, but that is the smallest part of my work as the Health Officer of a great railroad. The subject of drinking water for trains as well as for our employees is a matter of great importance. You have good water here in the South along the lines of our road, but along our line in Kentucky and in southern Illinois we have a great deal of trouble. In many places the well used for watering trains is bad and this is sterilized in the water coolers; but as these passengers wait for trains it is quite as necessary to have this water sterilized in the coolers in the waiting rooms. We use Burroughs and Wellcome's "Lime Tablets" to sterilize the drinking water and find them very useful. One tablet will sterilize ten gallons. In many places this drinking water is taken from a river, and after a heavy rain this water becomes very dirty. To remedy this I have two barrels, one above the other. The upper barrel we use as a sedimentation tank, using 1 grain of alum to the gallon and allowing it to settle for twelve hours. The upper part of this is drained off and passed through a Tripoli stone filter and is passed into another barrel which we use for sterilizing the water. The State Water Survey tells us that lime will not sterilize water if there is much organic matter in it. Hence we use this stone filter to remove all foreign matter, which you can use if we wish. An important item which I noticed in some railroads is the matter of keeping the drinking water cool by having the waste from the ice compartment pass through the bottom of the drinking water instead of passing directly out of the bottom of the ice compartment. This is quite an improvement over many water coolers that I have examined.

I believe that sneezing is much more dangerous than spitting, as the fine spray is carried in the air and may infect the person who sits near the sneezer. Hence regulations should be issued by all state boards to make it just as bad an offense to sneeze without protecting the nose and mouth as to spit on the floor.

Dr. John L. Jelks, Memphis, Tenn.—I would like to ask Dr. Dowling if he has instituted any action requiring the self-closing and screening of his station water closets? I think this is more important than any of the things he has mentioned. I think, furthermore, that the time is coming when railway trains are going to be required to carry railway tanks under their cars and have regulation depositories for effete material; for we are going to come to it because of the knowledge that we are transmitting disease along our railways, through flies, barefoot boys, the cows, and the water seepage and drainage. And, I may say that if it were possible, I believe the railroad companies themselves would be willing to institute some means of protecting health and life along their roads.

I would like to ask if Dr. Dowling has taken any steps along this line?

Dr. Dowling (closing).—In answer to Dr. Jelks, the State Board requires that every closet in Louisiana shall be fly-proof. The models known as the Stiles and the Kentucky are approved. We prefer the latter, as it is better suited to our conditions. In a large number of places the railroads, of their own accord, have built fly-proof closets or repaired old ones to meet the requirements. When these conveniences are not provided for court houses and other public buildings, we insist that they be put in, making an effort always to have the community co-operate. Where unreasonable demands have been made as to the installation of closets by the railroads, we have advised that these companies are responsible for conveniences only on their own property.

HISTORY OF THE ORIGIN OF THE RED CROSS*

By H. Lee Large, M.D.,
Superintendent of Health, City of Rocky Mount,
Rocky Mount, N. C.

The history of the origin of the Red Cross is a story illustrating the rapid rise of the "humane sentiment" in times of hu-

*Read before Red Cross Class, Rocky Mount, N. C., 1917.

man suffering and need, whether they be found in a burning or flooded city, in a plague-stricken state, or upon the battle fields of a war-ridden nation, which began in the latter half of the nineteenth century. And it is not strange that this great humane principle should have had its inception in time of war, beginning as it did in a timid and cautious putting forth of the "sentiment of humanity in war" amid the suffering produced by the clashing swords and rattling guns upon a European battle field. And it is from surroundings of the battle field that the Red Cross has become the means by which philanthropy can be grafted on to the wild and savage stem of war. It has, therefore, come to be loved and trusted, and people everywhere want to know about its origin, its work, and the principles upon which it acts. And stimulated by thoughts of what must follow when our Armies are thrust into the great World War of today, the philanthropic spirit in every one of us wants to know how and where we can best take our places in this great organization.

Although the gradual growth of the idea of something like humanity in war, stimulated by the ignorant and insane horrors of India and Crimea, and soothed by the work and teaching of the noble Florence Nightingale, had slowly but surely led up to the conditions which made such a movement possible, it was not until the campaign of Napoleon III in northern Italy again to wake the slumbering sympathies of the world that any definite steps were taken.

On June 24, 1859, occurred the memorable battle of Solferino, in which the French and Sardinians were arrayed against the Austrians. The battle raged over a wide range of country and continued for sixteen hours, at the end of which sixteen thousand French and Sardinian soldiers and twenty thousand Austrians lay dead or wounded on that field. The old and ever-recurring fact reappeared: the medical staff was wholly inadequate for the great task suddenly cast upon them. For days after the battle the dead in part remained unburied and the wounded where they fell, or crawled away as they could for shelter and help.

A Swiss gentleman, Henri Dunant, was traveling near that battlefield, and was deeply impressed by the scenes there presented to him. He joined in the work of relief, but the inadequacy of preparation and the consequent suffering of the wounded haunted him afterward and impelled him to write a book entitled "A Souvenir of Solferino," in which he strongly advocated more humane and extensive appliances of aid to wounded soldiers. He lectured about them before the "Society of Public Utility" of Geneva. The President of the Society, M. Gustav Moynier, a gentleman of independent fortune; Dr. Louis Appia, a philanthropic physician, and Adolph Ador, a counsellor of repute at Geneva, became interested in his views. They drew the attention of Dufour, the General of the Swiss Army, to the subject and enlisted his hearty co-operation. A meeting of this Society was called to consider "A Proposition Relative to the Formation of Permanent Societies for the Relief of Wounded Soldiers." This meeting took place on February 9, 1863. The matter was laid fully before the Society and was heartily received and acted upon, and a committee was appointed with M. Moynier to examine into methods by which the desired results might be obtained. This Committee decided upon a plan and announced for the 26th of the following October a reunion, to which were invited from many countries men sympathizing with its views, or able to assist in its discussion. This international conference was held at the appointed time and continued in session four days. At this meeting it was decided to call an international convention to be held at Geneva during the autumn of the following year (1864). At this convention was brought out the Geneva Treaty and a permanent International Committee with headquarters at Geneva was formed and the fundamental plan of the National Permanent Relief Societies adopted.

One of the first objects necessary and desired by the International Committee for the successful prosecution of its work was the co-operation by some of the more important states of Europe in a treaty which should recognize the neutrality of the hospitals established, of the sick and wounded, and of all persons and effects connected with the relief service; also, the adoption of a uniform protective sign

or badge. It inquired with care into the disposition of the several governments, and was met with active sympathy and moral support. It first secured the co-operation of the Swiss Federal Council and the Emperor of France. It shortly after procured the signatures of ten other governments, which were given at its room in the City Hall of Geneva August 22, 1864, and was called the Convention of Geneva.

Its sign or badge was also agreed upon, namely, a red cross on a white ground, which was to be worn on the arm by all persons acting with, or in the service of, the committees enrolled under the Convention.

The treaty provides for the neutrality of all sanitary supplies, ambulances, surgeons, nurses, attendants and sick or wounded and their safe conduct when they bear the sign of the organization, viz., the Red Cross. Although the Convention which originated the organization was necessarily international, the relief societies themselves are entirely national and independent, each one governing itself and making its own laws according to the genius of its nationality and needs. It was necessary for recognition and safety and for carrying out the general provisions of the treaty that a uniform badge should be agreed upon. The Red Cross was chosen out of a compliment to the Swiss Republic, where the first convention was held, and in which the Central Committee had its headquarters. The Swiss colors being a white cross on a red ground, the badge chosen was these colors reversed.

There are no "members of the Red Cross," but only members of societies whose sign it is. There is no "Order of the Red Cross." The relief societies use, each according to its convenience, whatever methods seem best suited to prepare in times of peace for the necessities in times of war and other troubles. They gather and store gifts of money and supplies; arrange hospitals, ambulances, methods of transportation of wounded men, bureaus of information, correspondence, etc. All that the most ingenious philanthropy could devise and execute has been attempted in this direction.

The dullest apprehension can partially appreciate the responsibility incurred by relief societies in time of war. The thoughtful mind will readily perceive that these responsibilities involve constant vigilance and effort during periods of peace. It is wise statesmanship which suggests that in time of peace we must prepare for war, and it is no less a wise benevolence that makes preparation in the hour of peace for relieving the ails that are sure to accompany war. We do not wait 'till battles are upon us to provide sufficient soldiery and munitions of war. Everything that foresight and caution can devise to insure success is made ready and kept ready against the time of need. It is equally necessary to hold ourselves in readiness for effective service in the mitigation of evils consequent upon war if humane work is to be undertaken for that purpose.

The International Committee assumed that there should be a relief association in every country which endorsed the treaty, and so generally was the idea accepted that at the end of the year 1864, when only ten governments (at the present time there are more than forty) had been added to the Convention, twenty-five committees had been formed, under each of which the legal societies were organized. It was, however, not until after 1870 that the movement began really to be popular, because the Franco-Prussian conflict of 1864; the German-Austrian War of 1866, and the conflict between France and Germany of 1870-71 brought not only contestants but neutral powers so to appreciate the horrors of war that they were quite ready to acknowledge the beneficence and wisdom of the Geneva Treaty. Many who approved of this humane idea and expressed a hearty sympathy for the object to be attained had heretofore regarded it as Utopian, a thing desirable but not attainable, an amiable and fanatical illusion which would ever elude the practical grasp. Nevertheless, the work accomplished during the wars mentioned won over not only such cavaliers, but persons actually hostile to the movement, to regard it as a practical and a most beneficent undertaking.

One of the things considered indispensable, and therefore adopted as a resolution by the conference of 1863, was the cen-

tralization of the work in each country separately by itself.

While the treaty must be universally acknowledged and its badge accepted as a universal sign, it was equally essential that the societies of the different countries should be simply national and in no respect international. It was, therefore, ordained by the conference that all local committees or organizations desirous of working with the Red Cross should do so under the auspices of the Central Committee of their own nation, which is recognized by its government and also recognized by the International Committee from which the sign of the Red Cross emanates. To recapitulate: The Commission of Geneva is the only International Committee. All other committees are simply national or subordinate to national committees. The function of the International Committee at Geneva is to serve provisionally as an intermediate agent between national committees and to facilitate their communications with each other. It occupies itself with the general interests of the Red Cross in correspondence and the study of theoretical and practical methods of amelioration and relief. The national committees are charged with the direction and responsibility for the work in their own country. They must provide resources to be utilized in time of need, take active measures to secure adherence, establish local societies and have an efficient working force always in readiness for action, and in time of need to dispatch and distribute safely and wisely all accumulations of material and supplies, nurses and attendants to their proper destination, and, in short, whatever may be gathered from the patriotism and philanthropy of the country.

In most countries the co-operation of women has been eagerly sought, and it is needless to say it has been eagerly given. In some countries, the central committees are mixed, both sexes working together; in others, sub-committees are formed of women, and still in others woman leads.

Each national organization must obtain and hold national recognition so as to make their work acceptable to their government.

In conclusion, let me say that the work of the Red Cross is constructive, seeking to relieve and make whole suffering and wounded humanity, no matter what destructive forces have brought about the trouble.

AUTHORS' ABSTRACTS

Surgery, Gynecology, Obstetrics and Genito-Urinary Diseases

(Continued from page 808)

resorted to, with a most wonderful result. The patient, who a few minutes before had been lethargic, grey with ashen facies and waxy fingers, became interested in everything about, the pulse completely changed its character, and with moist tongue and pink lips she began to ask intelligent questions. She cleared up completely and has remained well ever since.

Blood analyses in tabulated form, before and after transfusion, are recorded and show strikingly the beneficial changes by this treatment.

Relation of the Glands of Internal Secretion to the Female Pelvic Organs. Cecil W. Vest, Baltimore, Md. The American Journal of Obstetrics and Diseases of Women and Children, Vol. LXXV, No. 3, 1917.

While the glands of internal secretion form a complete system, certain of them seem to be definitely interrelated. In the cases in which there has been cessation of menstruation, the breasts were the first organs to give evidence of ovarian hypofunction. Usually a heavy sensation was noticed in these glands. This discomfort quite constantly present in the cases of amenorrhea in the obese woman, is rapidly lessened after the ingestion of luteum extract. Upon the reappearance of the flow, the breast secretion gradually diminished until the normal condition was again established.

Lactation atrophy of the uterus is most beneficially influenced by luteum therapy. Treatment was started when the child was eighteen months old, and after five months the flow became normal. In two cases of amenorrhea, which condition had been present seven and eleven years, respectively, the patients after a few months' treatment menstruated normally.

There are definite conditions associated with the female pelvic organs which are indicative of an abnormal condition of some of the glands of internal secretion. The hypophysis, thyroid and ovary are intimately associated; glandular therapy is of value in cases of lactation atrophy of the uterus, in certain cases of amenorrhea and in women at the menopause. It has been observed that the breasts respond sympathetically to changes in the pelvic organs when there is disturbance in the internal secretion of the latter. The breasts are often painful and in certain cases of amenorrhea after the ingestion of luteum extract they secrete an opaque, watery fluid. We have reported two cases of cessation of the menses following an acute infection.

EYE, EAR, NOSE AND THROAT

ADENOIDS AND TONSILS*

By L. Rosa H. Gantt, M.D.,
Spartanburg, S. C.

My four years' experience as Chairman of Public Health of the South Carolina Federation of Women's Clubs taught me that there is no more responsive audience than a gathering of club women, and I take it that a majority of you are such. I ask your attention not only as a physician, but also as a club woman and a mother, and in the capacity of the latter I wish to make my appeal as strong as possible in the interest of your children and the children of others. I do not wish to be too scientific or too technical in speaking to you, as I have a plain, straightforward message, affecting that which is nearest and dearest to every true woman's heart — her children — and I want to deliver it to you in such a way that it will be understood and carried home by you.

Some of you have never seen the tonsils never seen adenoids, and consequently I am going to translate these names into the symptoms that you have seen or may daily see in your contact with your little boy or girl. I am going to talk to you, therefore, about your child's "sore throat," his "catarrh in the head," colds, earache, mouth-breathing, snoring at night, irregular, projecting teeth, poorly developed upper jaw, dull facial expression, stoop shoulders and flat chest, nervousness, poor nutrition, lowered scholarships at school, his liability to become ill with every disease that happens to be passing in the community. These are the outward signs you know about. They are the things that the doctor notes and upon which the doctor acts when he tells you that your child's adenoids need to be removed.

Fifty years ago the most skilled of the physicians knew little or nothing about adenoids or tonsils. If the child suffered from an inflamed throat, the doctor would bandage it with red flannel, blister with turpentine or coal oil and send him on his way to spread tonsillitis through the school; much the same with "catarrh," with earache. As for mouth-breathing and snoring, these were regarded as bad habits, which in due time would correct themselves. These symptoms were treated as diseases and the physician of that day would not invade the larynx nor the throat, but would attempt to cure the complaints by outside applications. This is not surprising when we realize that up to little more than fifty years ago the living human body was all but inviolate to the touch of the most skilled physicians. Diseases were guessed at from the fever, the eruptions, the color of the skin, the outward appearance of things, and these symptoms were named and treated as disease. The names given to some diseases show this fact, — scarlet fever, from the peculiar scarlet color of the skin; yellow fever, from the yellow skin; smallpox, from the macular eruption caused by the disease. I am not discounting these tell-tale symptoms, for they are still accepted and recognized by the practitioner; but the microscope has revealed a world of knowledge greater than has the telescope, and by means of this instrument, the X-ray, the bronchoscope, the laryngeal mirror, by surgical investigation of things unseen on the surface of the body, have been and can be revealed certain definite knowledge as to the cause and cure of disease. This is the heritage of the modern physician.

It is due to the discovery of Crawford W. Long, a Georgia physician, that a wonderful anesthetic was given to the profession and made possible the great operations devised by Marion Sims, a South Carolina Surgeon, for the relief of suffering woman. Aseptic surgery was added, microscopic investigation of diseased tissue, of bacilli, of blood, etc., so that now the recognition, discovery and treatment of diseased tissue is comparatively easy, and today the modern surgeon does not hesitate to invade when necessary the heretofore most sacred precincts of human anatomy, to run down and remove the diseased tissues when their presence threat-

*Read before Public Meeting for Ladies, Southern Medical Association, Tenth Annual Meeting, Atlanta, Ga., Nov. 13-16, 1916.

ens the life or the well-being of the individual.

It is this new method in medicine, this going below the surface, this invasion of the human body that has revealed to the doctor the truth about your child's sore throat, his earache, his mouth-breathing, his snoring, his sleeping with his mouth open. They are not diseases; they are but the signs, the symbols, the symptoms of deeper things, signs of conditions existing in the body of your child that threaten his growth and development. They are the danger signals put forward by a wise Creator to warn the mothers of danger to the growth and development of their offspring and should put the parent on guard as to the well-being of the child.

It is an elementary fact that all that is life-giving enters the body through the front of the head, — the life-giving food and drink, through the mouth; the life-giving air, through the nose or nostrils. It is, therefore, clear that if these avenues are closed, restricted, infected or diseased, the health and development of the child must suffer. The avenues of approach to the stomach and lungs must be kept free from diseases, must be kept open if the child is to grow to normal healthy manhood or womanhood. The nostrils must be kept free from obstructions to permit the air to enter normally; the mouth must be kept free from inflammation, and healthy.

Now, if you will look in your child's mouth and depress his tongue, near the base of the tongue, to the right and left, you will see bedded in the tissue, varying in size from a hazel nut to the size of a walnut, two spongy glands. These are the tonsils, surrounded on all sides by moist mucous membrane, to catch and hold any infection that might threaten them. They are protected thus by Nature, and yet sentinels on the road to the stomach, they are exposed to contact with food substances *en route*. Their very position makes them easy of access to infection from the outer world. Once a disease germ reaches and attacks and inoculates their spongy, soft substance, it goes below the surface and the little gland itself becomes infected. The connection of these glands with other parts of the body furnishes means for the infection to travel into deeper parts and these diseased tonsils may become centres of infection for the entire system.

Nature protects the tonsil by giving it a power to resist, to throw off the invasion of diseases, just as it protects the other parts of the body. But close the nostrils, breathe through the mouth, chill the tissue by exposing it to constant drafts of unfiltered cold air from the outer world, and the resistance is broken down, and the tonsil becomes diseased and inflamed. It "telegraphs" its trouble to the brain by sending out through the nerves calls for help, and you have pain in the throat, and you have sore throat. The germ has entered the system. Perhaps by taking care of yourself, by avoiding exposure, by stimulation of the organ, the disease will be overcome. You will get well of the sore throat, but the attack has weakened the tonsil and in time you have another attack, and another, and finally the tonsils lose their power to resist, and their tendency to infection grows and the poison spreads through the system. It will be shown in your general health conditions. Your nerves suffer; you are nervous. Your voice suffers from the discharge, the product of inflammation. The discharge also trickles down into the stomach, and in time some infection breaks out in a distant part of the body and you can't understand where you contracted the disease. Have you ever noticed that an attack of "rheumatism" is always or nearly always preceded by an attack of tonsillitis? The medical profession has long since come to associate "rheumatism" with tonsillar infection, and even the laity speak of an attack of tonsillitis as "rheumatic sore throat." That nephritis, tuberculosis, nervous diseases, deafness and many other diseases have all had their inception in infections in the tonsils is becoming very well known. The lesson that I want to bring home to you is this: that sore throat, inflammation of the tonsils, is not to be accepted as a necessary evil, not a simple matter to be lightly treated, but it is a danger signal worthy of the attention of your physician. A condition of chronic inflammation of the tonsils, a tendency to sore throat, is a certain signal of deeper and more serious illness. Carry that les-

son home with you in caring for and rearing your children, and act upon it if you would bring your children to healthy normal manhood or womanhood.

Now, one step further, just a little back of these tonsils, out of sight from the outside, without the use of a mirror, between the nose and the throat, there is an open space, lined with mucous membrane, called by the doctors for the purpose of identification the "naso-pharynx." The air from the outer world is drawn into this space through the nostrils, and there warmed before it is carried into the lungs, and there are little ducts or tubes that extend from this space up to the ears so that the balance of air pressure in the ears may be maintained and that the middle ear may be ventilated. Under normal conditions, the naso-pharynx is a cavity lined with healthy, moist mucous membrane, but under irritation from oft-repeated colds, perhaps from the use of the pernicious pacifier, often from unknown causes, this membrane becomes inflamed and congested and there develops a superabundance of tissue, a curious spongy growth, sometimes in small quantities, sometimes greater. This growth is called "adenoids," adenoid tissue, adenoid growth, from its appearance, being "gland like." The tender membranes lining the throat of growing children are peculiarly susceptible to infection; they are subject to having this adenoid tissue developed. Let them but catch a cold and this spongy mass of tissue made up of small lobules becomes inflamed, swells up, closes the posterior opening of the nostril, cuts off the normal path of the necessary oxygen from the outer air to the lungs, and forces the child to open its mouth and to breathe through that organ instead of through the organ intended by nature for breathing purposes. Let a condition of chronic inflammation develop so that your physician tells you that your child has adenoids and what is the result?

First, your child must hold its mouth partially open in order to breathe; the tonsils, the vocal cords, the bronchial tubes, the delicate membranous linings become subjected directly to the cold air of the outer atmosphere, the nose and the cavities of the head can not be drained properly, colds develop, tissues become inflamed, inflammation spreads to the tubes and channels of the head; especially do the Eustachian tubes which ventilate the middle ear become involved and the child has roaring in his head, earache, deafness and often discharging ears. The inflamed, undrained, moist tissues make fertile field for the growth and development of germs and bacilli which enter with the outer air. The child becomes subject to attacks of colds, grippe, pneumonia, even tuberculosis, diphtheria, tonsillitis and scores of other infectious diseases.

Aside, however, from the fact that the inflamed tissues offer an avenue for the introduction of contagion, the effect upon the normal growth of the child is marked. The nostrils of the child being closed, the poor child in its ignorance, not understanding the reasons, struggling on in its effort to get the air necessary for life, breathes through the mouth. The child forms the habit of necessity of breathing with his mouth open, becomes a "mouth-breather." The effect of mouth-breahing will soon leave its mark upon the child. Contrary to Nature, mouth-breathing can not be habitually followed without destroying Nature's handiwork. In a growing child the effect soon can be seen by the trained eye of the physician. First, the skin becomes pale and transparent, showing the lack of proper oxidation of the blood. The lips become a dull pink or blue and the eyes heavy and lifeless. The mouth being held partially open, the teeth will project forward, the upper bones of the face fail properly to develop, and in extreme cases the body is more or less emaciated, the shoulders thrown forward, the breast bone becomes prominent—just such symptoms as will always result from long-continued obstructed nasal respiration. The voice of the child will become impaired, lose its resonance; its sleep will be rather restless, broken and noisy, with snoring, feverish tossing, dreaming and often muttering and talking. In extreme cases the child develops the charactertic adenoid face and carriage that is recognized by every nose and throat specialist as soon as seen. The condition invariably leaves its mark upon the child so clearly that "he who runs may read." The nervous and mental effect upon the child is just as pro-

nounced. The school teacher often misunderstands and misjudges the nervous, afflicted child and soon he becomes regarded as a dullard.

So long as the adenoids block the nasopharynx, so long as the tonsils inflame, they are a menace to the health, an open door for infection, a stumbling block to the proper physical and mental growth of the child. Once the tonsils are diseased, once adenoids develop, the medical profession stands helpless to stay their evil, except by complete removal, cutting out the tissue diseased and opening up free to food and air the avenues designed by Nature for their entrance. This is done that they may bother the child no more. If it were practical to treat the inflammation of tonsils and adenoids otherwise, doubtless, the medical profession would offer other remedies. Just as physicians can not permanently cure inflammation in the appendix, and just as they have come to believe that the only apparent functions of these organs are as danger signals of inflammation, things that inflame and hinder and torment, when the tormenting comes we cast out the evil by removing the diseased tissue. The focus of infection and inflammation being removed, the individual comes back to normal health and strength minus a part of his anatomy that he did not know he possessed until it became inflamed, and which he will never miss. We know that adenoids usually disappear when the child is about fifteen years of age. They dry up and go away, but so often, unless removed early in childhood, the effect of their presence is seen in the retarded growth and development of the individual. As for the tonsils, their presence is never felt or known in the absolutely healthy person, and their removal has never failed to improve the physical condition of the sufferer from their chronic inflammation.

In calling to the attention of you representative women these two menaces to the growth and development of children in your midst, I have not overdrawn the picture. The menace to childhood from adenoids and diseased tonsils is not visionary, but is real. In the recent medical inspection of school children in my home city, we found that nearly 30 % of all the school children were suffering from these defects, unnoticed by the doting mothers and fathers. The experiences of examiners in large cities show that on an average of one out of every four children in the public schools suffers from diseased tonsils, and one out of every ten suffers from adenoids. They pass unnoticed under the daily inspection of the fond parent, because the parent does not know and does not understand, but they are there, and in order to place the child in the best possible condition for maintaining the standard of health, for securing the educational advantage offered him, these defects must be remedied early that he may become a healthy, educated citizen.

AUTHORS' ABSTRACTS

Eye, Ear, Nose and Throat

Some Conditions Leading to Incorrect Diagnosis of Adenoids in Children. Virginius Dabney, Washington, D. C. The Boston Medical and Surgical Journal, Vol. CLXXVI, No. 25, June 21, 1917, p. 875.

The widely prevalent belief that difficulty in nasal respiration in children is pathognomonic of adenoids has led to unnecessary operations, though its presence can be more reliably determined by an examination, not of the nose or throat, but of the ear drum. Inspection of the former regions will, of course, frequently reveal its presence. Twice I was led to believe that a bony extension of the vomer back to the pharyngeal wall was an adenoid, as it was covered with a tissue much like adenoid. Blocking of the nares by growths, engorgement resulting from recent cold, full bladder at night, and chronic constipation (the last two causing swelling of the turbinates) all I have seen mistaken for adenoids. The most interesting cases are the anaphylactic ones, due to milk, eggs or soda crackers, in which every classical symptom of adenoid obstrdction will appear, and children who have had an acidosis seem peculiarly liable to this type of false adenoid trouble. This is for obvious reasons the most important class to recognize early, and it is especially important not to give them an anesthetic. A retracted ear drum, or one showing loss of normal color, position or light inflex is sufficient evidence of an adenoid in any child up to and including the twelfth year of age.

Some Points in Technic in Surgery of the Eye, Ear, Nose and Throat. Hilliard Wood, Nashville, Tenn. The Southern Practitioner, Vol. XXXIX, No. 8, August, 1917, p. 295.

Early diagnosis of glaucoma by contraction of the field and increase of tension is urged. Early operations give better end results than late operations. In the Elliot trephine operation complete iridectomy will often obviate the iritis which follows pin-hole iridectomy.

Iridotasis should be preceded for some hours by instillation of atropine to paralyze the sphincter pupillæ muscle and prevent the retraction of the iris into the anterior chamber following operation.

Enucleation of the eyeball under local anesthesia is advocated. Cocaine solution is instilled, followed by novocain solution injected subconjunctivally and then with a curved needle injected in the region of the ciliary ganglion. Inflammation of the eye is not a contraindication to local anesthesia. For elaborate technic, such as insertion of artificial vitreous, general anesthesia is advocated.

Transillumination of the eye will reveal vitreous opacities when the ophthalmoscope shows no fundus reflex.

Following sub-mucous resection, sterile rubber tissue is placed on each side of the nasal septum, and gauze, impregnated with sterile vaseline, placed against this.

After the removal of the packing in the external auditory canal following a radical or Stacke operation, no irrigation of the middle ear is used. A gauze wick is inserted.

In thrombosis of the lateral sinus the internal jugular vein should be ligated twice, but not divided between the ligatures. Excision of the jugular is usually unnecessary except where the exposed vein is thrombosed.

In exploring the brain for abscess, the incision of the dura mater should be as short as possible to prevent cerebral hernia.

Tracheotomy under local anesthesia by injecting novocain is advocated in obstructing diseases of the larnyx, such as stricture, carcinoma, etc.

Restoration of Sight in a Case of Hypermature Cataract of Twenty Years' Standing Complicated by Acute Glaucoma: Cutting the Capsule in Preliminary Capsulotomy, a Modification of Homer Smith's Way of Incising the Capsule. Max Talmey, New York, N. Y. New York Medical Journal, Vol. CV., No. 9, March 3, 1917, p. 401

The patient, 69 years old, suffering from hypermature cataract of 20 years' standing in right, and advanced cataract in left eye, was attacked by acute glaucoma in the right eye. Prompt cure through iridectomy encouraged him to submit to extraction of the hypermature cataract which until then he had refused to undergo because several competent ophthalmologists had advised against it.

Intracapsular extraction was rejected because of its dangers and untoward consequences. Instead, preliminary capsulotomy was employed thirty minutes before extraction. During lavage of the chamber after the extraction loss of vitreous body ensued. Two months later triangular iridotomy was performed. A year after the last operation visual acuity was 20-70 and Jager No. 3 near by.

The most remarkable point in the case is that competent ophthalmologists had considered extraction of the cataract contraindicated, their reasons being the assumption that the cataract was congenital and slight defectiveness of light projection. From the anamnesis written by the highly learned patient himself the author proves that the assumption was untenable. Regarding the second reason he remarks: "The final splendid result proves that defective projection in some areas of the field forms no contraindication against cataract extraction if the other tests are favorable." Theoretically and practically, this is the most important deduction from the case.

Of great value may be the author's modification of Homer Smith's preliminary capsulotomy, which is now practiced extensively. He proves that no cross cut is obtainable in the way Smith incises the capsule and devises a method to obtain a cross cut. This method he applied in his case.

The Use of Ethylhydrocuprein in Diseases of the Eye. William Zentmayer, Philadelphia, Pa. New York Medical Journal, Vol. CV., No. 8, February 24, 1917, p. 342.

Zentmayer reviews the experimental and clinical evidence of the effect of ethylhydrocuprein (optochin) on the pneumococcus. Ginsberg and Kauffmann found that when the eyes of a rabbit were injected with blood serum and a bouillon culture of the pneumococcus from an infected nasal cavity, and one eye not treated with optochin kept as a control, the one treated was almost invariably saved and the other lost. Schwartzkopff treated 27 cases of pneumococcus ulcer of the cornea. The final vision in 18 % was from 0.5 to 1. Twenty-two per cent. had l. p. or hand movements. Two eyes were lost. The author treated 8 cases of pneumococcal ulcer, most of them in an advanced stage, when the optochin was first used. Two perforations occurred and no eyes were lost. He also treated three cases of pneumococcus conjunctivitis. Two were rapidly cured. The third showed immediate improvement, but relapsed owing to a mixed infection and still remains uncured. One case of dacryocystitis was treated and cured.

As the result of his personal experience and that of others he concludes that: Ethylhydrocuprein (optochin) is a valuable aid in the treatment of pneumococcal infections of the eye. It often acts as a specific in pneumococcal ulcers of the cornea, especially if the treatment is begun before active tissue destruction has occurred. Almost all cases of this type of corneal ulceration under the action of this drug, to use the words of Ramsey, manifested a shorter and conspicuously more favorable course than did those dealt with in earlier days by the well recognized methods formerly in use. The evidence at hand as to its value in diseases of the cornea and conjunctiva due to other organisms than the pneumococcus or to other causes is insufficient on which to base a conclusion.

SPECIAL ARTICLE

THE RESEARCH FUNCTION OF THE MEDICAL COLLEGE*

By C. C. Bass, M.D.,
New Orleans, La.

During the past decade we have seen the remarkably rapid passing of the low-grade, inefficient and commercial medical college, leaving now few except the high-grade, modern schools. The change has been so rapid that it was almost accomplished before many of us realized what was happening. In olden days the professors of medicine and of surgery who bore the brunt of the teaching and directed their departments were usually very busy men, much sought for by the public in their community. The teaching consisted largely of didactic lectures with but limited demonstrations. The teaching staff was selected without any regard for laboratory training or experience, and especially without any regard for experience in medical research.

In the modern medical school, amongst the qualifications considered essential for heads of departments is experience in laboratory methods and in medical research. It is not enough to say they favor and endorse research. They must have had training and experience in research in their particular lines so they will be able to direct and encourage a certain amount of research upon the part of their respective staffs.

A certain amount of didactic instruction in a medical school is still believed to be essential, but the tendency is to laboratory and individual instruction. The teaching of medicine used to be, to a great extent, a matter of authority. Today it is largely a matter of demonstration, of example, of practice. The student is offered opportunities to study the symptoms of disease and its treatment by the bedside and is instructed in methods by which he may control and confirm the assertions which he may read in the books or hear from the instructors. These methods of control and confirmation have largely been developed as a result of medical research and of course can best be appreciated and taught by those who have had the necessary experience in research.

For a school to secure and hold teachers possessing the necessary qualifications with regard to medical research, it will be necessary to offer sufficient facilities for continuation of a considerable amount of research on the part of the head of the department and his staff; some of it, if possible, in co-operation with the students. No one who has once had such training and experience would consider as inviting any position that did not offer some such facilities and opportunity.

There are, indeed, few medical schools so richly endowed that they can afford many, if any, all-time purely research men. Nor do I believe the research function of the medical school extends this far. This should be kept largely to the institutes for medical research and to those especially favorably situated for such work. It is doubtful in my judgment whether a medical school should have any men who devote so much of their time to research that they are not brought in touch with the students frequently. Perhaps one meeting a week is the minimum time that any research teacher in any branch should spend with the students. Naturally he will be with his assistants and co-workers much more of the time and through them the students will feel his influence almost daily. The research function of the medical school, then, would seem to be to furnish such facilities as the means at hand will permit for research in the different departments on the part of teachers and students, but never to the extent of entirely separating any teacher from the students.

*Read in Conference on Medical Education, Southern Medical Association, Tenth Annual Meeting, Atlanta, Ga., Nov. 13-16, 1916.

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EDITORIAL DEPARTMENT

PATRIOTISM AND MEDICINE IN MEMPHIS

The question has frequently been asked: "Will the war affect the attendance and the character of the scientific work at the coming meeting of the Southern Medical Association?" The officers of the Southern Medical Association are optimists; but predictions of our attendance and of the high-grade papers and discussions at previous meetings have proved that in the past we have not been too roseate in our expectations; and we believe that there is every reason for the hope that the Memphis meeting will almost, if not quite, equal the wonderful Atlanta meeting both in attendance and in the work accomplished.

The very fact that we are at war and that physicians everywhere are trying to decide "the burning question" as to whether their duty is at home or in the Medical Reserve Corps will cause many to journey to Memphis to discuss the question with those who have been commissioned as medical officers, and with those who feel that they can serve best at home.

MILITARY AND PATRIOTIC FEATURES

Colonel Robert E. Noble, who, under the direction of Surgeon-General Gorgas, is at the head of the Personnel Division of the Reserve Corps, will be at Memphis to discuss questions pertaining to the Army; Rear-Admiral Cary T. Grayson, President Wilson's physician, will be there to tell of the Navy's Medical Reserve Corps. Surgeon-General Rupert Blue will describe the measures that are being carried out for the sanitation of the zones around the great military camps and cantonments; Colonel T. F. Goodwin, of the British Army Medical Service, will give us information regarding the Army surgeons in France; Dr. Franklin H. Martin, of Chicago, will outline the wonderful work of the General Medical Board of the Council on National Defense; Hon. John Sharpe Williams, the great statesman and orator of the United States Senate, will address the Association on "America's Part in the World War;" and many other celebrated men will discuss various phases of the medical, surgical and public health aspects of the war.

The scientific advances in surgical technic, military medicine and sanitation will also be a feature of the meeting that will not only interest commissioned medical officers and those who may later enter the service of the Army and Navy, but the physician who expects to continue in private work and desires to give his patients the latest and best treatment knows that he will learn much at the meetings of the Southern Medical Association. The address and moving picture demonstrations of the Carrel-Dakin method of treating infected wounds and the paraffin treatment of burns, by Dr. William S. O'Neil Sherman, of Pittsburg, who spent a year in France, will be worth to any physician the cost of the trip to Memphis.

Another of the interesting features of the meeting and which has been arranged by the officers of the Section on Public Health, will be the papers and addresses on military sanitation by representatives of our allies.

THE ORATIONS AND SCIENTIFIC PROGRAMS

The Presidential Address by Dr. Duncan Eve, of Nashville; the Oration on Medicine by Dr. George Dock, of St. Louis; the Oration on Surgery, by Major John Wesley Long, Chairman of the North Carolina Preparedness Committee; and the Oration on Public Health, by Dr. Ennion Williams, State Health Commissioner of Virginia, will, of course, measure up to the highest standards for the annual addresses and orations.

The programs for the Sections on Medicine, Pediatrics, Public Health, Surgery, and Ophthalmology and Oto-Laryngology as sent in by the Section Officers show that the war has not affected scientific medicine; and that the papers and discussions at Memphis will be of the same high quality that has characterized former meetings of the Southern Medical Association.

THE RAILWAY SURGEONS

The Southern States Association of Railway Surgeons, which was organized three years ago, and which meets on Monday before the Association convenes on Tuesday, has had wonderful success. Each year has shown improvement in the papers and discussions, but the officers say that the program this year is the best they have ever had.

MALARIA CONFERENCE

The National Committee on the Eradication of Malaria, of which Surgeon-General Gorgas is Honorary Chairman, Surgeon-General Rupert Blue, Acting Chairman, and Assistant Surgeon-General Henry R. Carter is Secretary, will also meet on Monday. A Symposium on Malaria, in which every phase will be discussed, will be of great interest not only to health officers and others who are engaged in the work of preventive medicine, but to the general practitioner who would learn the best methods for treating the disease.

CONFERENCES ON MEDICAL EDUCATION AND PUBLIC HEALTH

The Conference on Medical Education, which in Atlanta last year was quite a success, will be repeated at Memphis; and the war has brought up new problems for the medical colleges which will be considered.

The Conference of Public Health Officials of the Southern States with the Section on Public Health is always of great importance, and the problems to be discussed this year will be of particular interest to the ever-increasing number of physicians who are devoting their life's work to preventive medicine.

MEDICAL COLLEGE REUNIONS

The only thing about the Memphis meeting that the war has affected is the entertainment. The officers of the Southern Medical Association have requested the Memphis physicians to eliminate the social functions that can be dispensed with at a patriotic and scientific meeting of physicians. There will be enough, however, of social enjoyment at the meeting. The various college reunions will be especially enjoyable; because physicians will want to know about their old college mates who have gone to France and they will want to bid Godspeed to those who are going.

The reunion committee in Memphis has been very active, and the home-coming of the physicians who are graduates of the three medical schools that have combined with the Medical Department of the University of Tennessee will be the occasion for bringing back to Memphis many men who have happy memories of their college days in the great city on the banks of the Mississippi.

The Vanderbilt Alumni are planning a great reunion at Memphis in honor of their Professor of Surgery, Dr. Duncan Eve, President of the Southern Medical Association.

THE LADIES

At each meeting of the Southern Medical Association there has been an increase in the number of physicians who have been accompanied by their wives and daughters; for the reasons that they desire their wives to share with them the greatest pleasure of the year, and because they know that the ladies will find much to interest and entertain them while the scientific sections are in session.

The doctors, wives and daughters everywhere are the leading Red Cross workers and are therefore greatly interested in everything that promotes the comfort and well-being of our gallant soldiers. The Memphis Red Cross has made a wonderful record and the Red Cross workers from all over the South will be interested to see the various activities of the Memphis chapter.

Last year in Atlanta there were lectures every morning and afternoon on public health topics of interest to women. A number of celebrated physicians and Red Cross workers have been invited to address the ladies during the Memphis meeting; and the Memphis ladies may be depended upon, even if it is war times, to see that the visiting ladies enjoy their stay in one of the most delightful cities in the world.

WAR PROSPERITY

Few seem to realize the wonderful prosperity that the South is beginning to enjoy, and which will continue throughout and after the war. With cotton at twenty-five cents, and with bumper crops of grain and other food products which are being marketed at high prices, physicians will collect accounts that long have been considered hopeless; and the medical profession will therefore participate in war prosperity. With money in their pockets and with such roseate financial prospects, physicians will get the most out of life; and, of course, the best and most enjoyable thing a physician can do any year is to go to the meeting of the Southern Medical Association, where he may have the privilege, in the most delightful and beneficial way, of associating with, and of learning the views of, many of the greatest men in American medicine and surgery.

RAILWAY RATES

All the railroads in the South have granted a special rate to Memphis and return on account of the meeting of the Southern Medical Association. Since railway travel is unusually heavy, and it may be particularly so to Memphis during the meeting of the Southern Medical Association, it is best to engage sleeping car accommodations several days in advance of leaving home, in order to let the passenger agents know the number of extra sleepers that will be needed. The pleasure of attending any meeting is increased by having the assurance that one will have the comforts of travel.

MEMPHIS THE MEDICAL MECCA IN NOVEMBER

The various committees in Memphis have been unusually active and plans have been made for a great medical meeting in November. The progressive physicians in the sixteen Southern states have shown that they have felt the need for, and that they are interested in, the upbuilding of a great democratic medical organization in the region known as the South. The fact that the membership has increased from less than 300 to more than 6,000 in seven years proves that the Southern Medical Association has made its place as the second largest and most influential medical organization in this country; and previous meetings with an average attendance of 25 % of its membership has shown that no organization is doing higher grade work, or has more enthusiastic co-operation of its members. Memphis will be the Mecca for Southern physicians in November, and patriotism and medicine will be at high tide during the eleventh annual session of the Southern Medical Association.

ENLISTING MEDICAL STUDENTS AND HOSPITAL INTERNES

The serious problem of a shortage of doctors that would surely have resulted if medical students and hospital internes had been drafted into service in the National Army, has been solved in a practical and satisfactory way, that relieves the young men studying medicine, or those serving as hospital internes, from the embarrassment of claiming exemptions.

Provost-Marshal General Crowder has ruled that medical students may enlist as soldiers in the Reserve Corps of the Army; and that after having been examined and accepted, they may be discharged to study medicine, subject to being called into service. If the medical student should leave college, except for physical disability, or if he fails to graduate, or advance from one class to another, he may be called into service at any time; and if the interne gives up his work in a hospital, either voluntarily or because he fails to do his duty, he may be drafted as a private in the Army.

This ruling does not apply to students who have been studying medicine for less than one year, or to hospital internes who have been appointed since May 15, or to those who have been in hospital service for more than one year, or to internes in private hospitals of less than fifty beds.

This plan actually makes soldiers of medical students and the public will recognize that in preparing themselves for larger service than they could give their country as privates they are as patriotic as the brave Americans in France. The professors and instructors should feel that in continuing to teach medicine and surgery, they are serving their country as faithfully as their dutiful confreres who have been commissioned in the Medical Reserve Corps of the Army.

The medical schools, therefore, become training camps for officers in the Army because all medical students will enlist in the Reserve Corps. The students and faculties of medical colleges and hospital internes should be given the privilege of wearing the uniforms of soldiers and officers in the Army, but with an insignia showing that they are on duty in a medical school or in a civil hospital.

Surgeon-General Gorgas, in explaining the ruling to the General Medical Board of the Council of National Defense, said: "The medical student who enlists and is discharged from active duty to serve in a medical school is a soldier; and Provost-Marshal General Crowder desires the public to understand that medical students and hospital internes are not being exempted."

A circular, or an order, has been prepared which explains the plan of procedure for the medical student who desires to continue the study of medicine to follow, or for the interne who wishes to serve in a hospital. It may be obtained upon request from the Surgeon-General's office or from the deans or secretaries of medical colleges. It is briefly as follows: The medical student or hospital interne who has been drafted applies to the nearest recruiting officer for enlistment in the Reserve Corps of the Army. He is then examined and if accepted is discharged on condition that he continues to study medicine, or to serve as an interne, until he is prepared to become a medical officer in the Army.

It is believed that practically all young men who are studying medicine will enlist; and that with the possibility of being called into service as a private upon failure to graduate, or to make the necessary grades required to advance from one class to another, it is predicted that medical students will study as they have never done before; and that teaching in a war medical college will become the most delightful form of pedagogy known to educators. It is said that the faculties of other colleges, both for boys and girls, desire to adopt the same plan.

INSUFFICIENT NOURISHMENT

In a number of editorials the JOURNAL has pointed out some of the dangers from overeating, particularly of meats. The physician should also constantly have in mind the fact that many patients are suffering because they do not eat enough.

The person who undereats is injuring himself just as surely as he who eats more than he can digest and assimilate. The undernourished, because their bodies are in a lowered state of vitality, are more susceptible to tuberculosis, anemia, pellagra and other diseases of malnutrition; while those who eat too much die early from chronic nephritis, heart disease, apoplexy and other degenerative diseases.

The "happy medium," a well balanced diet, is the key to efficiency, happiness and long life.

While the great majority of adults eat too much, there are thousands who eat too little or who eat too much of one kind of food and not enough of others. The undernourished class is not entirely made up of the poor who can not buy food; because in this blessed land of ours there are relatively few who can not earn enough to buy the necessities of life in normal times, though with the present inordinately high prices many will suffer for want of food.

Women are more frequently undernourished than men. Mothers and housekeepers, even in homes of plenty, frequently do not eat enough. They also make up the class who work hardest and who have the longest hours, and who, therefore, should be well nourished. Business and working women are also frequently undernourished because they receive low wages and many of them prepare their own food when they are rushed in the mornings or are tired at night. They often make their lunches on a cup of coffee or tea and a sandwich, which satisfies hunger and stimulates, but does not give enough nourishment.

Women, more than men, partly for these reasons, have neurasthenia, hysteria and other nervous troubles which are relieved by rest and forced feeding for a few weeks. It is also a fact, which may be partly accounted for by deficient nutrition, that women are afflicted with and die from tuberculosis, pellagra and anemias more than men.

While more women than men are undernourished, many of the "stronger" sex, particularly those who have long hours and lead sedentary lives, have not the appetites and do not eat enough. Bookkeepers, office men of all kinds, teachers, physicians and other professional men frequently belong to that class.

Many school children will not take time from work or play to eat. They rush to school in the morning, eat very little or no luncheon because it takes time from play, and at night they are often too tired to eat. As a consequence they do not develop as they should either physically or mentally.

Trees and other plants grow directly in proportion to the character of the soil from which they derive their nutrition. Animals, including the highest type, the genus homo, will not grow or thrive if not properly nourished. Parents should see to it that their children eat properly if they would have them grow into strong men and women.

The slender individual is usually, but not always, undernourished. It is characteristic for certain families to be slender and it is not possible to fatten them, but with a properly regulated diet most percan be made to take on weight. It is a fact that long-waisted, slender people have not the appetites, and they often have digestive disturbances. They consequently suffer more from deficient nutrition.

A few years ago a number of the large life insurance companies undertook to investigate the causes of deaths of more than

2,000,000 policyholders. They found that a very large proportion of those who died of tuberculosis were underweight; and that those who were of normal weight rarely died of the disease. Their conclusion was that the well-nourished individual rarely develops tuberculosis. Consequently, life insurance companies will not insure men or women who are 30 % underweight.

Military authorities will not accept for service men who are too slender because experience has shown that they have not the endurance to stand the hardships of war. It is, therefore, the time for slender men and women to watch their diet, and if it is found that they do not eat enough they can build themselves up and increase in weight by eating more.

Food conservation and the appeals to economize in foods do not apply to the undernourished individual because every man, and every woman, should get in the best possible physical condition to serve his country in his particular vocation, whether it be in the home, on the farm, in the factory, or in the trenches of France.

PUBLIC HEALTH IN ENGLAND

Not long ago Dr. William H. Welch, Professor of Pathology at the Johns Hopkins Medical School, and President of the Board of the Rockefeller Institute for Medical Research, made a visit abroad for the dual purpose of securing new ideas to incorporate in the proposed School of Hygiene and Public Health at the Johns Hopkins University and for looking into the question of national preparedness.

In England Professor Welch was impressed by two things in particular, one being that the English had been backward in the manufacture of lenses and synthetic drugs, and the other that they greatly excel the Germans in the enforcement of public health measures. He says that at present in England the nearest approach to a school of hygiene and public health is a nine-month course leading to the degree of Doctor of Public Health. Such a course is now offered in this country by Tulane and Harvard.

Even in the small villages throughout England, Dr. Welch found the health officer a full-time man who had taken a D.P.H. course. Furthermore the welfare of the people is being looked after with a surprising minuteness of detail. For instance, the health officer may insist upon the cutting of a window in a small room in a home which requires more ventilation. In handling refuse, etc., they were found correspondingly efficient. In this connection it is interesting to recall that Mr. John Shakespeare, the poet's father, was fined a few shillings for having left ashes in his alley, showing how early sanitary interest was manifested in England.

The American people, particularly those residing in the South, are awakening to the importance of trained sanitarians as whole-time health officers.

INFORMATION REGARDING PHYSICIANS EMPLOYED UNDER CONTRACT, U. S. ARMY

The following information, furnished us by the Surgeon-General, U. S. Army, regarding contract service will be of interest to those who can not for good reasons serve throughout the war, but who would be glad to give their services to their country for a few months:

The Surgeon-General has authorized the employment of physicians under contract for limited service. The contract doctor is given a contract for a definite class of work at a definite place. At the termination of that work his contract can be annulled if so desired, or he can be continued in service and given another assignment. He is practically still a civilian, has received no commission and has been obliged to pass no physical examination. He acquires no claim against the Government for disability incurred in the line of duty. He is obliged to wear uniform and has a compensation of one hundred and fifty dollars per month, with mileage for travel under order. The executive officers of the Surgeon-General's office are very much opposed, and for excellent reasons,

to offering commissions in the Medical Reserve Corps for temporary service. It will be best in the future to give men who can only render such temporary service contracts instead of temporary commissions, so that there will be only two classes of men: first, officers of the Medical Reserve Corps commissioned for service during the war; and, second, contract doctors employed for a comparatively brief period. Physicians accepted for the Medical Reserve Corps can take contracts for service until they have received and accepted their commissions, when the contract will be annulled.

It will be seen that the contract system enables the Government to make use of the large number of physicians who from patriotic motives are desirous of rendering some service, but feel themselves unable to accept a commission for service during the war.

Contract surgeons rank as First Lieutenants. They are required to wear uniform at all times when on active service. They wear the caduceus and the First Lieutenant's bar, but no other insignia. The uniform designated is of olive drab cloth, either woolen or cotton. Cotton is much cheaper and is desirable during the summer and in warmer climates. Ready-made suits can be obtained for $16 in Washington and can be had at still more reasonable prices in some other places. The most economical arrangement is to have one cotton suit upon leaving home, and if other clothes are needed, to obtain such as are issued to the soldiers from the Quartermaster, who will probably be able to supply them at camp. Olive drab woolen suits cost not less than $40 made to order, but can be obtained much more cheaply ready made, and especially if obtained from the Quartermaster. A woolen suit would not be necessary in warm weather. The campaign hat costs from $3 to $5. The best quality Stetson hat is more comfortable, but more expensive. The cord costs $1. Russet leather leggings and russet leather shoes are also required, but any russet shoes may be worn. Bedding must be provided. The simplest way is to wrap blankets and a pillow together with a telescopic field cot and such articles of clothing as will not be injured by rolling in a piece of canvas which is securely tied with rope and checked as baggage. Toilet articles, etc., may be carried in a hand bag. The so-called locker trunk for officers is very convenient, but a bedding roll and hand bag will carry all of the necessities. A basin and tin cup will be needed at camp, but can probably be procured on arrival. Physicians are requested to take their own stethoscopes with them.

Officers and contract surgeons are entitled to mileage at 7 cents a mile from their home address, as given at the time of their appointment, to their station of active duty, payable after the journey has been performed. To secure this mileage a special voucher procurable from the Quartermaster's pay officer at the camp must be filled out and the order of appointment to duty attached to it. The order to the Adjutant General must, therefore, be preserved. Upon arrival at the camp, report should be made in person to the commanding officer, which is done by visiting the Adjutant, presenting your order, stating your name and that you desire to report for duty, giving the date of your departure from your home or previous station. The Surgeon of the camp will undoubtedly be glad to give any advice and assistance needed thereafter.

A LETTER FROM FRANCE

The following letter from Dr. E. L. Gilcreest, First Lieutenant, Medical Reserve Corps, Surgeon to American Expeditionary Forces, France, to Dr. Joseph C. Bloodgood, Baltimore, Md., Chairman, Committee on Preparedness of Southern Medical Association, is not only very interesting but emphasizes the urgent need of physicians to apply for commissions in the Medical Reserve Corps. Dr. Gilcreest's home address is Dallas, Tex., and he is a member of the Committee on Preparedness of the Southern Medical Association:

Paris, France, July 30, 1917.

Dear Dr. Bloodgood:

The American Expeditionary Force was warmly welcomed by the French and, with characteristic alacrity, was soon well established.

No branch of the service is better represented than that of the medical. Among the thoroughly equipped base hospital units from America already in Europe are the Johns Hopkins Hospital, under direction of Major Finney; The Lakeside Hospital, under Major Crile; the Peter Brent Brigham Hospital, under Major Cushing; the Presbyterian Hospital, under Major Brewer; and the St. Louis Unit, under Major Murphy. These are units that will reflect credit on American medicine and will completely establish in the minds of our colleagues the scientific strides which our medical schools have made during the past two decades.

As one of the Committee on Preparedness for the Southern Medical Association, I wish to say that the urgency for physicians to prepare to come to France has not been overdrawn. This is the fourth time that I have been in France since the beginning of the war, and it is very apparent that no service among our allies has suffered more than that of the medical. We should, therefore, urge all available physicians to "get their house in order" and to prepare to do their bit whether at home or abroad. We should not forget that we are now at war with the most efficient warring nation that the world has ever seen and that the time is long past for procrastination.

It is the sublimity of folly to lull ourselves into the belief that the war will soon end. It is impossible for any one ever to have sufficient data on hand at any one time to be able to form an opinion as to the duration of this titanic struggle. Let us prepare for a long war and hope for a short one. Thousands of our soldiers are here and thousands are on their way. It is to us as medical men that the Nation looks for the care of these fighters. Let us be worthy of the high ideals of our profession and, as in all national perils, be found among the first to risk our lives in the saving of the lives of others.

Faithfully yours,

E. L. GILCREEST.

MEMPHIS---THE CONVENTION CITY

Very slowly the big crate was lifted from the wagon, and when at last it was laid out upon the ground the men handling it heaved a sigh of relief.

"Terrific big stone that!" said one of them. "Wonder what it is?"

Another chap with claws and a hammer began to take the boarding off and gradually the contents of the case were revealed. It was a stone—a long slender shaft—century blackened and weather beaten. There were letters on it—strange letters of another day and another nation. Figure pictures of men and of animals all seemed to tell some vague story of a people long since dead.

"A perfect specimen," remarked a large man, who seemed to have more than casual interest in the shaft. "A perfect specimen."

The stone was a column removed from one of the temples of Memphis-on-the-Nile. Upon it were the serried mud marks of many inundations. It was rough, cracked, worn. It was historic.

Here in the Memphis of today they were unloading a relic of the Memphis of yesterday.

The New World in its search for things historical had reached out its hand and grasped a bit of the Old World.

The Pillar of Pharoes had been uncovered to the sparkling sunlight of a mellow Southern winter day and the shadow that fell across it was the shadow of one of the finest skyscrapers south of the Ohio River.

The Egyptians who had set it in place in the Memphis of old had been succeeded by stone masons, who were again to place it securely upon a new base—this time in one of the prettiest pleasure parks in the Americas.

The clang of the battles which had doubtlessly waged about it centuries ago had given way to the subdued roar of the near-by business district. The bullock cart chiseled upon its sleek sides gazed with envy upon the smooth gliding touring cars conveying busy business men to their day's work.

It was a strange linking of the Old World and the New, this bringing of the relic of old Memphis to the Memphis of today.

Yes, there was another Memphis. It was a city of the Nile — a city of commerce—of war—of learning, and, after a fashion, of art.

A man from the Memphis of today had brought the column home with him in order that the children of the new Memphis might gaze upon it and thereby gain inspiration for even greater and better things.

And this Memphis of today? What of it?

It is an aristocrat — this Memphis of the South. No sudden product of the newly rich—no overnight transformation from poverty into vulgar wealth. It is in harmony and proportion with itself and it is just as it should be. If you have doubt, ask any Memphisian!

The mound builders founded Memphis. They located it where it is because of all the land along the Mississippi for many miles to the north and to the south, Memphis alone is high and dry above the biggest high water.

These mound builders were a race of mystery. The year of their high tide is clothed in oblivion. Certain it is that they lived, and certain it is that they died. What they did in the interim is lost, except that they constructed mounds for signal and council purposes. Arrows in these mounds proved that they killed game or fought; pottery shows that they cooked; dried pigments give us cause to believe that they painted; but whether it was their faces or dwelling places, no one has hazarded.

After the mound builders came the Indians. The tribe was that of Chisca, known today as the Chickasaws. They were good Indians, these Chickasaws. They were brave, somewhat diplomatic, and splendid traders. They fought, and fought hard, with their neighboring tribes, and having been victorious, they traded with them. Chisca, small of stature, was

*The Journal is indebted to the Memphis Chamber of Commerce for this interesting article. It was prepared by Mr. Edward McCormack, of the Publicity Department.

great of ingenuity, and before his time rolled by, the canoes of many tribes paddled to the bluffs upon which his town was built.

DeSoto came. He found the Mississippi and the Chickasaws. He had fought his way through the hostile tribes. Chisca welcomed him — so history says — and Spaniard and Indian smoked the pipe that cements peace. Then DeSoto, discoverer of the great Inland Empire, died, and by night his body was lowered beneath the surface of the mighty Mississippi.

So the history of Memphis goes. No sudden transformation about it. Just good, steady, consistent evolution. The white man followed the discoverer. A settlement was founded. Indians and whites lived together, and finally the paleface decided that he wanted to spread out. The Chickasaws didn't like the idea. They resorted to arms. Beaten, they were then shipped across the river, bag and baggage, wigwam and war hatchet. Today one will find their direct descendants living within a few miles of Memphis in Arkansas.

Memphis continued to grow. Andrew Jackson — he of presidential fame — was the first big real estate man in the city. He hadn't any sumptuous office and he paid no licenses. But nevertheless, he owned half of Memphis.

John Overton and other historic families owned big shares of it. They sold. The road that went through the town became Main street. The government at Washington gave a mail contract to a flat boat company. Then the steamboat and the railroad came.

All the time Memphis was getting bigger and better. Streets began to form. A government was set up. The city was incorporated. Politicians came into fashion. Duels went out. The flat boatman watched the river steamer take his business away. The dinky little contraptions held together on the big river by the nerve of man and the grace of God evoluted into floating palaces. It was the harvest time of the river traffic.

Another railroad. Still another. They came in from all directions. A trunk line reached out and grabbed a couple of them. The Nation was beginning to waken up to the consolidation-of-effort idea.

The habit of squatting on property in the suburbs went out of fashion. The register of deeds no longer did an allotment business. Things were prosperous and it was time for a war.

Secession smoke had been puffing out in large quantities. Somebody shot at Fort Sumpter and that somebody started a fire that it took four years to put out.

Memphis was alternately in the hands of Confederate and Federal. It developed Nathan Bedford Forrest, who although he didn't take the trouble to wear gold lace, was nevertheless a great general. Forrest put in several busy years at making trouble for the Federals and history for the Nation. When Lee decided that the war was over, Forrest came back to Memphis to live.

It took a couple of years for the city to round around again. But like a good fighter who has gotten a hard blow, she revived and came up scrappier than ever.

More prosperity and then more trouble.

Fever. It came twice. It gave Memphis about as hard a tussle as any city ever had to encounter. It wiped out lives and money. It brought sanitation, advanced methods, common sense in handling public health, good sewerage, a board of health, and last but not least, a determination to win or die in the attempt.

That is history. It's history that was hard in the making and splendid in its results. It tested a people and found them Belgian. No flinching—just a facing of the situation, a calm handling of it, and then, as always with Memphis, the ultimate victory.

"Watch Memphis" — that is the slogan adopted by the real estate board. "For Memphis" is the motto of the Commercial Club, the great commercial organization of the city. And "See Memphis" should be the aim of every American.

There are 250,000 people in Memphis and a few thousand more on the outskirts. They are proud of their city and they have a right to be. Some day it will be as large as Chicago, and having become as large as Chicago, with true Memphis spirit it will then set out to equal New York.

CORRESPONDENCE

CASE RECORDS

Editor, SOUTHERN MEDICAL JOURNAL:

As a member of the Southern Medical Association, I desire to stress the need of more written records of the views and achievements of our Southern medical workers. Any thoughtful observer, who will take the trouble to search the archives of medical literature, can not fail to be surprised at the paucity of Southern names among the various contributors. It can not be from either lack of brains or actual attainments, for in both the Southern physicians have proved themselves the peers of any, regardless of section, nationality or clime.

The mournful fact remains, however, that in but few instances have these achievements been recorded in black and white, while the vast majority of master spirits who accomplished these wonderful deeds seemed satisfied with the serene consciousness of duty well done, neglecting to place on paper the results of their successful endeavors. That this almost fatuous indifference has worked grave injustice to Southern medical history no one will deny.

Let me cite you two instances, one in modern and one in ancient history, either of which will amply prove my contention.

When, on March 30, 1842, in the little town of Jefferson, Ga., Dr. Crawford W. Long, by the use of ether, removed without pain a wen from a man's neck, he simply accepted it as a meritorious act on his part and modestly made neither "fuss nor feathers" over the discovery of anesthesia. Four and a half years later, in the Massachusetts General Hospital, Dr. W. T. Morton administered ether while Dr. Warren amputated a leg. What did Dr. Morton do? He immediately "hot-footed" to the nearest place where he could make a written report, and almost before the fumes of ether had evaporated from the operating room Dr. Morton was announcing his discovery to the four quarters of the civilized globe; and for this no one can blame him.

The result of Dr. Long's misplaced modesty, as against the live, enterprising spirit of Dr. Morton, was a dislocation of history, which has only within the last few years been corrected.

In the first century of the Christian era there lived and labored together two eminent characters—one who was too busy doing good to write; the other, who carefully recorded all important events as they transpired. These men were Apollos and Paul. The former was the *doer* alone; the latter, both *doer* and *writer*. The consequence has been that Paul is known to every man, woman and child in Christendom, while Apollos, who is believed by many to have been the greater of the two, is known only by what Paul wrote concerning him.

Among the Southern physicians who are practicing their profession either in peaceful surroundings or "amid war's alarms" are many who are meeting and will meet with unique experiences; will observe rare phenomena, or with idealistic mentalities, will see visions and dream dreams not permitted to prosaic individuals. To these or to any earnest toilers in our chosen field this message is given.

Let not, therefore, these discoveries and achievements of our Southland depend for perpetuation upon mere oral transmission, but with the written word let us speed them on a lasting journey adown the corridors of time.

GEORGE M. NILES, M.D.

Atlanta, Ga., Sept. 14, 1917.

BOOK REVIEWS

Focal Infection

By Frank Billings, Sch.D., M.D. New York: D. Appleton & Co.

In our review of this book, page 28, August 1917 issue, we quoted the price as $1.25. In that we were in error. The correct price is $2.00.

Botanic Drugs

Their Materia Medica, Pharmacology and Therapeutics. By Thomas S. Blair, M.D., Fellow, Harrisburg Academy of Medicine; Editor, "The Medical Council"; Author of "Public Hygiene"; "A Practitioner's Hand-Book of Materia Medica and Therapeutics", and "Pocket Therapeutics"; Former Neurologist to Harrisburg (Pa.) Hospital. 394 pages. Cincinnati: Therapeutic Digest Publishing Co., 1917. Cloth, $2.00.

This book deals only with botanic drugs. It gives their materia medica, pharmacology and therapeutics. The work is compiled by an author of wide experience who possesses pleasing literary style not commonly found in books on medical subjects. The author claims that too little attention has been paid to botanic drugs and that it is high time they were coming into their own. The importance of botanic drugs is forcibly impressed upon us at this time when importations are attended with so much difficulty on account of the world war.

The New System of Gynecology

Edited by Thomas Watts Eden, M.D., F.R.C.S., F.R.C.P., Temp. Major, R.A.M.C., Vice-President of Section of Obstetrics and Gynecology of Royal Society of Medicine; Obstetric Physician, Charing Cross Hospital; and Surgeon, Chelsea Hospital for Women; and Cuthbert Lockyer, M.D., B.S., F.R.C.S., F.R.C.P., Vice-President of Section of Obstetrics and Gynecology of Royal Society of Medicine; Obstetric Physician to Out-Patients, Charing Cross Hospital; and Surgeon to In-Patients, Samaritan Free Hospital for Women. In three volumes. 1059 halftones and 2500 pages. Many plates in colours. London: Macmillan Co., L't'd, 1917. Three volumes in cloth, $36.00.

Seldom has the reviewer been so agreeably impressed as by "The New System of Gynecology." His feeling was akin to that of a botanist who suddenly encounters for the first time a perfect specimen of some favorite plant. The first favorable impression, of course, was produced by the mechanical make-up of the volumes, including the numerous colored plates. Next on closer acquaintance with the text it was seen really to be a collection of gynecological monographs by fifty-one specialists of England and America, but principally the contributors are British. A striking feature, and one which bespeaks the scientific spirit underlying the whole, is the fullness with which the pathology is genesic conditions is discussed and the excellent cuts of gross tissue and microscopic sections of diseased organs. Taken all in all, this system is

unquestionably the most authoritative work on gynecology which has yet appeared.

The Preventive Medicine and Hygiene

By Milton J. Rosenau, Professor of Preventive Medicine and Hygiene, Harvard, Director, School for Health Officers of Harvard University and the Massachusetts Institute of Technology, Formerly Director of the Hygienic Laboratory, U. S. Public Health Service, etc. With chapters upon Sewage and Garbage by George C. Whipple, Professor of Sanitary Engineering, Harvard; Vital Statistics, by John W. Trask, Assistant Surgeon-General, U. S. Public Health Service; Mental Hygiene, by Thomas W. Salmon, Medical Director, National Committee for Mental Hygiene, etc. Third Edition. Illustrated. Containing a special section on Military Hygiene. New York and London: D. Appleton & Co. 1917. Cloth, $6.00.

Three editions of a book in four years are proof enough of its popularity at any rate. The present (third) edition has a very important addition in the form of a special section of 119 pages devoted exclusively to military Hygiene, and prepared in the same careful, exhaustive manner as the rest of the book. As the author so truthfully says: "In one sense, this entire volume may be regarded as dealing with Military Hygiene, for the fundamental questions concerning food, water, soil, ventilation, vital statistics, disposal of wastes, disinfection, and the prevention of communicable diseases are essentially the same for the soldier and the civilian." The profession will welcome this edition as its appearance is most timely.

Gynecology

For Students and Practitioners. By Thomas Watts Eden, M.D., F.R.C.S., F.R.C.P. (Temp. Major, R.A.M.C.) Obstetric Physician, Charing Cross Hospital; Joint Lecturer in Obstetrics and Gynecology, Charing Cross Hospital Medical School; Surgeon, Chelsea Hospital for Women; Consulting Physician, Queen Charlotte's Lying-in Hospital, Late Examiner to the Universities of Oxford and Leeds, to the Royal College of Physicians and Surgeons, and to the War Office; and Cuthbert Lockyer, M.D., B.S., F.R.C.S., F.R.C.P., Assistant Obstetric Physician, Charing Cross Hospital; Joint Lecturer in Obstetrics and Gynecology, and Lecturer in Practical Obstetrics, Charing Cross Hospital Medical School; Surgeon to In-Patients, Samaritan Free Hospital for Women; Obstetric Physician to Out-Patients, Great Northern Central Hospital; Examiner to the University of London and to the Royal College of Physicians and Surgeons, and the British Lying-in Hospital. 896 pages with 513 illustrations and 20 coloured plates. New York: The Macmillan Co., 1916. Cloth, $8.00.

This book is a work of art from a publisher's standpoint. From the viewpoint of the gynecologist it has been found, after months of reference to it, to be a source of the greatest satisfaction. The two eminent authors are to be congratulated upon producing the most complete single volume work on gynecology we have seen.

Constipation, Obstipation and Intestinal Stasis (Auto-Intoxication)

By Samuel Goodwin Gant, M.D., LL.D., Professor of Diseases of the Colon, Sigmoid Flexure, Rectum, and Anus, New York Post-Graduate Medical School and Hospital. Second Edition, enlarged with 259 illustrations. 584 pages. Philadelphia and London: W. B. Saunders Co., 1916. Cloth, $6.00.

To write a book on this subject either from the standpoint of the surgeon alone or from the side of the medical man, would be almost as logical as divorcing medical from surgical genito-urinary diseases or making the same distinction between medical and surgical gynecology. And yet we do see that done every day. The fields of medical and surgical proctology merge so gradually the one into the other that a hard and fast line of demarkation is quite impossible. Professor Gant has for years been a ahrd student of protology and has made several distinctly worth-while contributions. Furthermore his chair in a great teaching institution for many years has rendered him capable of presenting the subject in a logical and attractive form. The book does full justice to the medical and the surgical sides of proctology and furnishes a reliable textbook as well as reference work on this too-often neglected [illegible].

The Practical Medicine Series

Volume III, Series 1917. The Eye, Ear, Nose and Throat. Edited by Casey A. Wood, C.M., M.D., D.C.L., Albert H. Andrews, M.D., George E. Shambaugh, M.D. Chicago: The Year Book Publishers. Price $1.40, entire series of 10 volumes $10.00.

This annual tabloid review of the year's work in ophthalmology, rhinology and oto-laryngology is always a welcome visitor. Although a part of a series of ten volumes published primarily for the general practitioner, it will prove a valuable reference book to the specialists as well.

Asthma

Presenting an Exposition of the Nonpassive Expiration Theory. By Orville Harry Brown, A.B., M.D., Ph.D., formerly Assistant Professor of Medicine, St. Louis University; with a foreword by George Dock, LL.D., M.D., Professor of Medicine, Washington University Medical School, St. Louis. 330 pages with 36 engravings. St. Louis: C. V. Mosby Co., 1917. Cloth, $4.00.

A monograph on an ancient as well as modern disease, which has been alike baffling at all times. The book represents the accumulated knowledge of nine years of careful investigation of the subject and elaborates the author's "Nonpassive Expiration Theory." It is a very valuable treatise.

An Index of Differential Diagnosis of Main symptoms

By various writers. Edited by Herbert French, M.A., M.D., Oxon, F.R.C.P. Lond., Physician, Pathologist, and Lecturer, Guy's Hospital; Consulting Physician to the Radium Institute. Second Edition. Post Octavo, 923 pages, with 37 colored plates and over 300 illustrations in the text. New York: William Wood & Co., 1917. Cloth, $10.00; half-morocco, $11.00 net.

The present editions is produced along the same lines as the former one and only differs in a general revision and the addition of certain new sections and many new colored plates. The various symptoms are arranged alphabetically and under them are grouped the causes producing them, along with a differential diagnosis. The information is accurate and the text well illustrated. From our use of this we are thoroughly convinced of its great value as a ready reference book.

Some Personal Recollections of Dr. Janeway

By James Bayard Clark. New York: G. P. Putman's Sons. $1.00.

This volume contains some recollections of Dr. Edward Gamaliel Janeway, who in his day, was the best diagnostician in the world. It sets forth in a beautiful way something of the man himself, his life, and the self sacrifice and singleness of purpose which lifted his above the ordinary world.

Roentgen Technic

By Norman C. Prince, M.D., Attending Roentgenologist to the Omaha Free Dispensary for Children; Associate Roentgenologist to the Douglass County Hospital, Bishop Clarkson Memorial Hospital, Swedish Immanuel Hospital, St. Joseph's Hospital and Ford Hospital, Omaha, Nebr. St. Louis: C. V. Mosby Co., $2.00.

This little volume with seventy-one illustrations has been published particularly for the general practitioner who has installed an X-ray equipment. It gives a thorough outline of the general knowledge and workings of the X-ray and is an excellent volume for the beginner in this work. The principal feature of the book is the chapter on Positions and Exposures.

Diseases of the Genito-Urinary Organs and the Kidney

By Robert H. Greene, M.D., Professor of Genito-Urinary Surgery at the Fordham University, New York; and Harlow Brooks, M.D., Professor of Clinical Medicine, University and Bellevue Hospital Medical College. Fourth edition, thoroughly revised. Octavo of 666 pages, 301 illustrations. Philadelphia and London: W. B. Saunders Co., 1917. Cloth, $5.50.

This edition adds new material, still further enhancing the value of the book. The subject is presented from the standpoint both of the physician and sur-

geon. However, we were particularly pleased with the excellent sections on operative urology.

Collected Papers of the Mayo Clinic

Rochester, Minn. Edited by Mrs. M. H. Mellish, Vol. VIII, 1916. Octavo 1014 pages and 411 illustrations. Philadelphia and London: W. B. Saunders Co., 1917. Cloth, $8.50.

Its name is descriptive of its contents, which comprise over ninety articles which were published during 1916 by members of the staff of the Mayo Clinic. The papers include surgical, internal medical, experimental and laboratory subjects. The articles are well edited by the efficient Mrs. M. H. Mellish, whose taste and sound judgment have always gone far toward making the "Mayo Clinic" volumes so attractive as to form and arrangement.

Case Histories in Obstetrics

Groups of cases illustrating the fundamental problems which arise in obstetrics. By Robert L. DeNormandie, A.B., M.D., F.A.C.S., Assistant in Obstetrics, Harvard Medical School; Assistant Physician, Boston Lying-in Hospital; Surgeon, Gynecological Department, Boston Dispensary. Second edition. 516 pages. Boston: W. M. Leonard, 1917.

The book is divided into twenty-eight sections, each consisting of a group of cases illustrating a problem in obstetrics. First, the history is given in detail; then the examination; next the differential diagnosis; and lastly the treatment, outcome, etc. The cases are not hypothetical but constitute actual histories of patients seen either in private or hospital practice. The superiority of case teaching over didactic lectures hardly needs mentioning. There is much to be gained from this book as it deals not only with the common but with many rare complications of pregnancy.

Handbook of Physiology

By W. D. Halliburton, M.D., LL.D., F.R.C.P., F.R.S., Professor of Physiology, King's College, London. Thirteenth Edition (being the 26th edition of Kirkes' Physiology), with nearly 600 illustrations in the text, many of which are colored, and three colored plates. 930 pages. Philadelphia: P. Blakiston's Son & Co., 1917. Cloth, $3.50.

This book is a lineal descendant so-to-speak of that classic in medical literature, "Kirkes' Physiology," and therefore can boast of an ancient and honorable history. However, so many advances have been made in the department of physiology since Prof. Halliburton took charge of the work that it is an entirely new book, well up to date, and representative of the most advanced thought.

Animal Micrology

Practical Exercises in Zoological Micro-Technique. By Michael F. Guyer, Ph.D., Professor of Zoology in the University of Wisconsin; President (1916), the American Microscopical Society. With a chapter on drawing, by Elizabeth A. Smith, Ph.D., Instructor in Zoology in the University of Wisconsin. 89 pages, illustrated. Revised edition. Chicago: The University of Chicago Press, 1917. Cloth, $2.00.

A very useful book to workers in tissue microscopy. Our only criticism is that he treats rather too briefly on the modern frozen section methods of section cutting, which have gained so much popularity in surgical clinics throughout America. However, the book as a whole is quite satisfactory.

First Aid to the Injured and Sick

An advanced ambulance handbook. By F. J. Warwick, B.A., M.B., Cantab., M.R.C.S., L.S.A., A.K.C., Lond. Major R.A.M.C. (T.), T.D., Commanding 136th (South Midland) Field Ambulance; Lecturer and Examiner on Ambulance, Home Nursing and Hygiene to the Educational Department London County Council; Lecturer on Ambulance to the late School Board for London; Honorary Life Member and late Lecturer and Examiner of the St. John Ambulance Association; and Hon. Divisional Surgeon St. John Ambulance Brigade; and A. C. Tunstall, M.D., C.M., F.R.C.S., L.R.C.P. Ed. Major R.A.M.C. (T.) Rtd., Commanding R.A.M.C.'s 1st Brigade London Division National Reserve; late attached to 7th Battalion the Essex Regiment; military member of the City of London Territorial Force Association, etc., etc 246 pages, profusely illustrated. Tenth Edition. Revised. 140th thousand. New York: William Wood & Co., 1917. Price, $0.80.

Although this is a pocket edition it goes into the subject of first aid more fully than any handbook we have seen. With so many good cuts the text is made very clear.

OTHER BOOKS RECEIVED

Chemical and Microscopical Diagnosis—By Francis Carter Wood, M.D., Formerly Professor of Clinical Pathology, College of Physicians and Surgeons, Columbia University, New York, Director, Laboratories and Attending Physician, St. Luke's Hospital, New York, Director of Cancer Research, Georgia Cancer Special Research Fund, Columbia University. Third Edition. 761 pages, with 144 illustrations in the text and 10 plates, 9 of which are colored. New York and London: D. Appleton & Co., 1917.

A Manual of Pharmacology and its applications to therapeutics and toxicology. By Torold Sollmann, M.D., Professor of Pharmacology and Materia Medica, Western Reserve University, Cleveland, O. Octavo 766 pages, illustrated. Philadelphia and London: W. B. Saunders Co. 1917. Cloth, $4.50 net.

A Laboratory Guide in Pharmacology. By Torold Sollmann, M.D., Professor of Pharmacology and Materia Medica, Western Reserve University, Cleveland, Ohio. Octavo 255 pages, illustrated. Philadelphia and London: W. B. Saunders Co. 1917. Cloth, $2.50 net.

A Reference Handbook of the Medical Sciences, embracing the entire range of scientific and practical medicine and allied sciences, by eminent writers. First and second editions edited by Albert H. Buck, M.D. Third edition, completely revised and rewritten, edited by Thomas Lathrop Stedman, A.M., M.D., Illustrated by numerous chromolithographs. Complete and in eight volumes. Volume VII. and 402 half-tone and wood engravings. William Wood & Co., New York, 1917.

Intensive Treatment of Syphilis and Locomotor Ataxia by Aachen Methods—By Reginald Hayes, M.R.C.S. Baillière, Tindall & Cox, 8 Henrietta street, Covent Garden, London. Second edition. Price 4s cents

Examination of the Urine and Other Clinical Side-Room Methods—By Andrew Fergus Hewat, M.B., Ch.B., M.R.C.P., Ed. Tutor in clinical medicine, University of Edinburgh. Lecturer Edinburgh Post-Graduate Vacation Course. Fifth edition. Paul B. Hoeber, New York. Price $1.00 net.

Impotency, Sterility and Artificial Impregnation—By Frank P. Davis, Ph.B., M.D. C. V. Mosby Co., St. Louis, 1917. Price $1.25 net.

Quiz Compends—Materia Medica (Potter). Eighth edition, revised. P. Blakiston's Son & Co., Philadelphia. Price, $1.25 net.

Blood Pressure from the Clinical Standpoint. By Francis Arthur Faught, M.D., formerly Instructor, Laboratory of Clinical Medicine, Medical Department, Temple College, Philadelphia. Second Edition, Thoroughly Revised. Octavo of 175 pages, illustrated. Philadelphia and London: W. B. Saunders Co. 1916. Cloth, $1.25 net.

The Medical Clinics of Chicago—Volume II, Number 6 (May, 1917). Octavo of 251 pages, 46 illustrations. Philadelphia and London: W. B. Saunders Co., 1917. Published bimonthly. Price per year: Paper, $8.00; cloth, $11.00.

The Elements of the Science of Nutrition—By Graham Lusk, Ph.D., Sc.D., F.R.S. (Edin.), Professor of Physiology, Cornell Medical School, New York. Third Edition, Reset. Octavo of 641 pages, illustrated. Philadelphia and London: W. B. Saunders Co., 1917. Cloth, $4.50 net.

The Principles of Pharmacy—By Henry V. Arny, Ph.G., Ph.D., Professor of Chemistry, College of Pharmacy, Columbia University; Member of the Committee of Revision of the U. S. Pharmacopoeia. Second Edition, Revised and Entirely Reset. Octavo of 1056

pages with 61 illustrations. Philadelphia and London: W. B. Saunders Co., 1917. Cloth, $5.00 net.

Diseases of the Stomach, Intestines and Pancreas—By Robert Coleman Kemp, M.D. Professor of Gastro-Intestinal Diseases, Cornell University Medical School. Third Edition, Revised and Enlarged. Octavo of 1026 pages with 138 illustrations. Philadelphia and London: W. B. Saunders Co., 1917. Cloth, $7.00 net; half morocco, $8.50 net.

Clinical Gynecology—By James C. Wood, A.M., M.D., F.A.C.S., etc. 236 pages. Philadelphia: Boericke & Tafel, 1917. Cloth, $2.00 net.

Mortality Statistics 1915—Sixteenth Annual Report. Department of Commerce, Bureau of the Census. Sam L. Rogers, Director. 707 pages. Washington: Government Printing Office, 1917.

Pathogenic Microorganisms A Practical Manual for Students, Physicians and Health Officers. By William Hallock Park, M.D., Professor of Bacteriology and Hygiene, University and Bellevue Hospital Medical College; and Director of Bureau of Laboratories, Department of Health, N. Y. City; and Anna Wessels Williams, M.D., Assistant Director of Bureau of Laboratories, Department of Health; Consulting Pathologist, N. Y. Infirmary for Women and Children; Assisted by Charles Krumwiede, Jr., M.D., Assistant Director, Bureau of Laboratories; Assistant Professor of Bacteriology and Hygiene, University and Bellevue Hospital Medical College, N. Y. City. Sixth Edition, Enlarged and Thorough Revised. 709 pages, with 209 engravings and 9 full-page plates. New York and Philadelphia: Lea & Febiger, 1917. Cloth, $4.75.

The Practical Medical Series—Vol. II, Series 1917—General Surgery. Edited by Albert J. Ochsner, M.D., F.R.M.S., LL.D., F.A.C.S., Surgeon-in-Chief, Augustana and St. Mary of Nazareth Hospitals; Professor of Surgery, Medical Department, State University of Illinois. 608 pages, illustrated. Chicago: The Year Book Publishers, 1917. Cloth, $2.00. Entire series of 10 volumes, $10.00.

The Practical Medical Series—Vol. IV, Series 1917—Gynecology. Edited by Emilus C. Dudley, A.M., M.D., Professor of Gynecology, Northwestern University Medical School; Gynecologist, St. Luke's and Wesley Hospitals, Chicago; and Sydney S. Schochet, M.D., Instructor in Gynecology, Northwestern University Medical School; Adjunct Gynecologist, Wesley Hospital, Chicago. 232 pages, illustrated. Chicago: The Year Book Publishers, 1917. Cloth, $1.35. Entire series of 10 volumes, $10.00.

The Practical Medical Series—Vol. V, Series 1917—Pediatrics. Edited by Isaac A. Abt, M.D., Professor of Pediatrics, Northwestern University Medical School; Attending Physician, Michael Reese Hospital; with the Collaboration of A. Levison, M.D., Associate Pediatrician, Michael Reese Hospital.

Orthopedic Surgery.—Edited by John Ridlon, A.M., M.D., Professor of Orhopedic Surgery, Nortwestern University Medical School with the Collaboration of Charles A. Parker M.D. 240 pages, illustrated. Chicago: The Year Book Publishers, 1917. Cloth, $1.35. Entire series of 10 volumes, $10.00.

Medical War Manual No. 1—Sanitation for Medical Officers. By Edward B. Vedder, M.D., Lieut.-Col., Medical Corps, U. S. A. Authorized by the Secretary of War and under the Supervision of the Surgeon-General and the Council of National Defense. Pocket size with blank leaves for notes. 211 pages, illustrated. Philadelphia and New York: Lea & Febiger, 1917. Price, $1.50.

The Treatment of Diabetes Mellitus—With Observations upon the Disease Based upon Thirteen Hundred Cases. By Elliott P. Joslin, M.D. (Harv.), M.A. (Yale), Assistant Professor of Medicine, Harvard Medical School; Consulting Physician, Boston City Hospital; Collaborator to the Nutrition Laboratory of the Carnegie Institution of Washington, in Boston. Second Edition, Enlarged and Thoroughly Revised. 559 pages, illustrated. Philadelphia and New York: Lea & Febiger, 1917. Cloth, $4.50.

International Clinics—Vols. I and II, 27th Series. 1917. A quarterly of illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, neurology, pediatrics, obstetrics, gynecology, orthopedics, pathology, dermatology, ophthalmology, otology, rhinology, laryngology, hygiene and other topics of interest to students and practitioners. By leading members of the medical profession throughout the world. Edited by H. R. M. Landis, M.D. Philadelphia with the collaboration of many others. Philadelphia and London: J. B. Lippincott Co., 1917. Cloth, $2.00 per number.

Handbook of Suggestive Therapeutics, Applied Hypnotism, Psychic Science—A manual of practical psychotherapy, designed especially for the practitioner of medicine, surgery and dentistry. By Henry S. Munro, M.D., Omaha, Neb. Fourth Edition, Revised and Enlarged. 481 pages, illustrated. St. Louis: C. V. Mosby Co., 1917. Cloth, $5.00.

International Health Board, Third Annual Report—Jan. 1, 1916-Dec. 31, 1916. The Rockefeller Foundation. New York City, January, 1917.

Notes on Galvanism and Faradism By T. M. Magill, M.B., B.S. Lond., D.P.H., R.C.S.I. (Hons). 220 pages, with 67 illustrations. New York: Paul B. Hoeber, 1916. Cloth, $1.50.

Practical Urinalysis—By B. G. R. Williams, M.D., Director Wabash Valley Research Laboratory; Author of "Laboratory Methods," etc. 142 pages, illustrated. St. Louis: C. V. Mosby Co., 1916.

Progressive Medicine—Vol. XX, No. 1, Whole number 73, March 1, 1917; Vol. XX, No. 2, While number 74, June 1, 1917; Vol. XX, No. 3, While number 75, September 1, 1917. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics, Materia Medica and Diagnosis, Jefferson Medical College, Philadelphia, assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College, Philadelpria. Philadelphia and New York: Lea & Febiger, 1917. Quarterly, $6.00 per annum.

Diseases of the Stomach—A Text-Book for Practitioners and Students. By Max Einhorn, M.D., Professor of Medicine, New York Post-Graduate Medical School and Hospital; Visiting Physician, German Hospital. Sixth Revised and Enlarged Edition. 569 pages, illustrated. New York: William Wood & Co., 1917.

Practical Materia Medica and Prescription Writing—With Illustrations. By Oscar W. Bethea, M.D., Ph. G., F.C.S., Assistant Professor of Materia Medica and Instructor in Prescription Writing, Tulane University of Louisiana. Formerly Professor of Chemistry and Professor of Pharmacology, Mississippi Medical College, etc. Second Revised Edition. 533 pages. Philadelphia: F. A. Davis Co., 1917. Cloth, $4.50.

The Prescription—Therapeutically, Pharmaceutically, Grammatically and Historically Considered—By Otto A. Wall, Ph.G., M.D., Professor of Materia Medica, Pharmacology and Botany, St. Louis College of Pharmacy; Member Committee for Revision Pharmacopoeia of the United States, 1880-1890 and 1890-1900; Second Vice-President, Convention for Revision United States Pharmacopoeia for 1900-1910; Presiding Officer, U. S. Pharmacopoeia Convention of 1910; One of the Authors of the "Companion to the United States Pharmacopoeia;" Author of "Handbook of Pharmacognosy," "Lessons in Latin," etc. Fourth and Revised Edition. 274 pages, illustrated. St. Louis: C. V. Mosby Co., 1917. Cloth, $2.50.

Diseases of the Skin—By Richard L. Sutton, M.D., Professor of Diseases of the Skin, University of Kansas School of Medicine; Former Chairman, Dermatological Section, American Medical Association; Member American Dermatological Association; Assistant Surgeon, United States Navy, Retired; Dermatologist to Christian Church Hospital. Second Edition, Revised and Enlarged. 1021 pages, with 833 illustrations and 8 colored plates. St. Louis: C. V. Mosby Co., 1917. Cloth, $6.50.

Diseases of Children—A Manual for Students and Practitioners. By George M. Tuttle, M.D., Clinical Professor of Pediatrics, Washington University Medical School; Consulting Physician, St. Louis Children's Hospital; Attending Physician, St. Luke's Hospital; Consulting Pediatrician, St. Louis Maternity Hospital; and Phelps G. Hurford, M.D., Pediatrician, St. Louis Lutheran Hospital; Assistant in Pediatrics, Washington University Medical School; Physician to Out-Patients' Pediatric Clinic, Washington University; Associate Physician, St. Louis Hospital for Infectious Diseases. Third Edition, Thoroughly Revised

and Enlarged. 599 pages, illustrated with 47 engravings and 3 plates. Philadelphia and New York: Lea & Febiger, 1917. Cloth, $3.50.

Food and the Principles of Dietetics—By Robert Hutchison, M.D., Edin. F.R.C.P., Physician to London Hospital; Physician with Charge of Out-Patients to Hospital for Sick Children, Great Ormond Street; Author of "Lectures on Diseases of Children," "Patent Foods and Patent Medicines," "Applied Physiology," and Joint-Author of "Clinical Methods." Fourth Edition. 617 pages, with plates and diagrams. New York: William Wood & Co., 1917. Cloth, $4.00 net.

Physical Exercises for Invalids and Convalescents—By Edward H. Ochsner, B.S., M.D., F.A.C.S., Pres. [illegible] State Charities Commission; Attending Surgeon, Augustana Hospital, Chicago. 54 pages, illustrated. St. Louis: C. V. Mosby Co., 1917.

SOUTHERN MEDICAL NEWS

ALABAMA

Dr. E. D. Bondurant, Mobile, Major, M. R. C., U. S. Army, has been ordered to Atlanta, Ga., for duty.

Dr. W. S. Johnson, Notasulga, 1st Lieut., M. R. C., U. S. Army, has been ordered for duty at Camp Kearny, Linda Vista, Cal.

Dr. Herbert P. Cole, Mobile, Major, M. R. C., U. S. Army, has been ordered to Camp Wheeler, Macon, Ga., as chief of the surgical service.

Dr. D. B. Faust, Clayton, and Dr. F. H. Craddock, Sylacauga, have been ordered for duty at Syracuse, N. Y.

Dr. J. Shahan, Gadsden, Lieut. M. R. C., U. S. Army, has been ordered to Camp Shelby, Hattiesburg, Miss.

Dr. Geo. A. Mershon, Fairhope, was recently appointed Assistant Surgeon at the Soldiers' Home, Marshalltown, Iowa.

Dr. M. H. Hagood, Brewton, Major, M. R. C., is recovering from a surgical operation.

Dr. H. D. Westmoreland, Huntsville, has succeeded Dr. F. E. Baldridge, deceased, as surgeon for the Southern Railroad.

Dr. S. A. Mathews, formerly with the University of Kansas as Professor of Medical Physiology, has been appointed to the Chair of Physiology and Pharmacology, University of Alabama, School of Medicine, Mobile.

Dr. J. S. McLester, Birmingham, has been commissioned Major, M.R.C., U. S. Army and ordered to Camp Sheridan, Montgomery, as chief of the medical base hospital there.

Dr. Edwin Sellers, Anniston, is in New York, where he will remain indefinitely.

Dr. G. C. Lake, U. S. Public Health Service, will act as state bacteriologist until a permanent director of laboratory is appointed.

Dr. Cabot Lull, Birmingham, President Jefferson County Medical Society, has answered the call for service. He has been commissioned a Captain in the Medical Reserve Corps.

Dr. Seale Harris, Birmingham, has been commissioned a Major in the Medical Reserve Corps and has been ordrered for duty on October 1 in the Food Division of the Surgeon General's office at Washington.

Dr. Chas. H. Savage, Jackson, Assistant Surgeon, U. S. Navy, was married to Miss Helen S. Woolley, of Guntersville, Ala., on August 18.

Dr. H. G. Perry, Secretary of the Medical Association of the State of Alabama, the latter part of August compiled some interesting information, which we give here: His report will show that there are in civil practice in Alabama at this time about 2,400 doctors; that each doctor is required to cover an average of 21.5 square miles of territory and to serve approximately 1,000 people. The report further shows that up to August 18, 241 Alabama doctors had been recommended by the Surgeon General for commissions in the Medical Reserve Corps. A detailed study of the report shows that in Baldwin county the average area per doctor is 73 square miles. In Jefferson county, however, the average area is only 2 1-2 square miles per doctor. Each doctor in Autauga county must look after the welfare of 1,790 people, while in Jefferson county the number of persons to each physician is only 639. Bullock county, with only 18 physicians, has given seven for service in the army. Jefferson county, with 448 doctors, has given only 54. Mobile county, with 109 doctors, has given 24, and Montgomery county, with 100 doctors, has up to August 18 contributed 12. A careful study of the report indicates with mathematical certainty what counties can afford to spare most medical men.

Deaths

Dr. Samuel P. Hand, Demopolis, aged 57, died August 13 from angina pectoris.

Dr. W. R. Barron, Marion, aged 83, died July 22.

ARKANSAS

The thirty-ninth annual session of the Medical School of the University of Arkansas, Little Rock, under the direction of Dr. Morgan Smith, Dean, opened Monday, September 17. Eleven members of last year's faculty are in the service in the Medical Corps of the Army. The Isaac Folsom Clinic, recently completed at a cost of $40,000, was opened for the reception of dispensary patients. The baby clinic will be opened at the beginning of the term.

Dr. H. C. Cody, U. S. Public Health Service, who has been assisting in the sanitary survey, has been ordered to Spartanburg, S. C., to engage in similar work.

At Little Rock steps have been taken to see that cases of contagious diseases are immediately reported to the public health service office.

Dr. M. S. Drennon, Rush, has received a commission in the Reserve Corps and ordered to Fort Oglethorpe.

Dr. L. M. Lile, Jonesboro, 1st Lieut., M. R. C., has been ordered to Fort Ethan Allen, Vt.

DISTRICT OF COLUMBIA

Dr. Harvey W. Wiley was recently the chief speaker before the Arts Club on the subject, "Why Medicine?"

Drs. D. L. Borden and E. G. Breeding have been commissioned in the Medical Reserve Corps and ordered for duty at the Walter Reed Hospital.

Dr. T. J. Sullivan has been commissioned in the Medical Reserve Corps and ordered for duty at Fort Benjamin Harrison.

The following Washington physicians have been commissioned in the Medical Reserve Corps and ordered to Fort Oglethorpe: Drs. J. H. Collins, A. G. Compton, J. M. Heller, W. H. Littlepage, W. G. Marks, C. E. Maxwell, J. B. Pigott, C. E. Ralph, H. F. Sawtelle, W. O. Wetmore, W. E. Whitson.

Dr. L. H. English, Lieut., M. R. C., has been ordered to Syracuse, N. Y., for duty.

Death

Dr. David G. Allen, Washington, aged 38. Passed Assistant Surgeon, U. S. Navy, died September 5 on board the Panther.

FLORIDA

Dr. John S. McEwan, Orlando, is at present on duty at the Hospital Americain, Juilly-Siene-et-Marne, France, thirty miles from the German lines.

Dr. G. C. Tillman, Gainesville, Dr. R Leffers, Lakeland, and Dr. L. J. Efird, Tampa, Lieuts., M. R. C., have been ordered to Fort Sill, Okla., for instruction in gas defense.

Dr. J. S. Coker, Gardner, Lieut., M. R. C., has been ordered for regimental duty at Syracuse, N. Y.

Dr. B. A. Burks, Titusville, Lieut., M. R. C., has been ordered to Baltimore, Md., for six weeks' course of training at Phipps Clinic.

Dr. J. H. Hall, Sopchoppy, Lieut., M. R. C., has been ordered for duty at Emory University, Atlanta, Ga.

Dr. J. D. MacRae, Tampa, has been ordered to Anniston, Ala., as bacteriologist at the base hospital at Camp McClellan.

West Florida and South Alabama Medical Association, which meets at Pensacola, has decided to postpone the holding of any further meetings until further notice. This has been thought necessary owing to the chaotic conditions incident to the war.

Dr. John S. Helms, Tampa, Drs. C. P. Rogers, R. C. Turck and N. M. Haggie, Jacksonville, have been chosen to represent Florida in a conference of 350 surgeons of the American College of Surgeons with a purpose of looking to the standardizing of hospitals in this country for the sake of efficiency.

Among Jacksonville physicians who have already been called for duty in the M. R. C., or expecting orders, may be mentioned: Drs. Stanley Erwin, James Pasco, James A. Livingston, Carey P. Rogers, Geo. M. Mitchell, J. B. Parramore, A. R. Acker, Samuel Aronovitz, H. O. Black, J. E. Floyd, T. Z. Cason, T. G. Croft, Gaston Day, W. G. McKay, A. R. Parrott, H. A. Peyton, S. A. Richardson, J. K. Simpson, R. C. Turck, Tom Field, T. G. Barfield, H. B. Cordes, D. R. Handley, E. G. Dirge, Edward Jelks, C. L. Jennings, Ralph Green, L. A. Greene, H. H. Harris, G. E. Henson, H. Hanson, J. E. Gammon, W. T. Elmore, Ronald E. O'Hara and Lynwood I. Evans.

Deaths

Dr. Thomas A. Chappell, Jacksonville, aged 72, died July 27 from cerebral hemorrhage at St. Luke's Hospital. He was a Confederate veteran.

Dr. Wilbur C. Rice, Zephyrhills, aged 37, was drowned August 27 while bathing in Zephyr Lake.

Dr. Fergis S. Hall, Orlando, aged 83, died August 26. He was a surgeon in the Civil War.

GEORGIA

The First Congressional District Medical Society held its annual meeting in Savannah early in August. Dr. Robert L. Miller, Waynesboro, was elected President; Drs. Luther A. DeLoach, Glenville, and A. J. Waring, Savannah, Vice-Presidents. The next meeting will be held at Statesville.

The Atlanta City Board of Health has ordered that the treating of drug addicts be discontinued. It has been found that many of these addicts, although they have promised to enter the hospital at Atlanta, which the state maintains for this purpose, would after treatment go to other cities and obtain similar treatment.

Dr. A. G. Little, Valdosta, has been appointed by Governor Dorsey a member of the State Board of Medical Examiners to succeed Dr. T. D. Patterson, of Cuthbert, whose term had expired.

Dr. J. H. Chandler, Swiansboro, County Physician for Emanuel County, was recently operated upon for appendicitis.

Dr. H. L. Van Winkle, Atlanta, Captain, M.R.C., has been ordered for duty in the local cantonment laboratory.

Dr. L. P. Daly, Atlanta, Lieut., M. R. C., has been ordered to Fort McPherson for the purpose of equipping and training his command after completion of mobilization of Red Cross Ambulance Company No. 20.

Dr. J. J. Beaton, Waycross, Lieut., M. R. C., has been ordered to Petersburg, Va., for duty.

Dr. Chas. M. Remsen, Atlanta, Lieut., M.R.C., has been ordered to Camp Kearny, Linda Vista, Cal.

Dr. Y. A. Little, Millersville, Captain, M. R. C., has been ordered to Montgomery.

Dr. O. F. Keen, Brewton, Dr. B. H. Clifton, Lyons, and Dr. J. F. Arthur, Quitman, Lieuts., M. R. C., have been ordered to Syracuse, N. Y.

Dr. C. R. Bullock, Atlanta, Lieut., M. R. C., has been ordered to report to the Commanding General, Southern Department.

Dr. Wm. A. Ellison, Milledgeville, has been elected Commissioner of Health of Baldwin County by the County Board of Health at a salary of $1,200 and all expenses, devoting all of his time to the work.

The Medical Department, University of Georgia, Augusta, began its 86th term September 12.

Dr. D. D. Smith, Stillmore, a member of the Emanuel County Exemption Board, caused the arrest of one W. R. Brown, of Summit, because of an offer of $500 to exempt his son from military service on the ground of being physically disqualified.

Dr. T. C. Davidson and Dr. C. B. Upshaw, Atlanta, Dr. R. E. Graham, Stillmore, Dr. T. E. Blackburn, [illegible] have received commissions in the Medical Reserve Corps.

Dr. James K. McClintic, Augusta, 1st Lieut., M. R. C., has been ordered into foreign service "Somewhere in France."

Dr. W. L. Funkhouser, formerly of Rome, has announced his removal to Atlanta, with offices in the Candler Building, where he will limit his practice to diseases of children.

Deaths

Dr. J. B. Roberts, Atlanta, aged 76, died August 30.

Dr. Wm. L. Jerkins, Moultrie, aged 46, died August 8.

Dr. J. H. Williford, Dawson, aged 66, died suddenly September 10.

Dr. L. M. Andrews, Crawfordsville, aged 82, died September 14. He was a soldier in the Confederate Army.

KENTUCKY

Dr. M. S. Veal, Daniel Boone, Lieut., M. R. C., has been ordered to Louisville for duty.

Dr. M. Warren, Science Hill, Lieut., M. R. C., has been ordered to Little Rock, Ark., for duty in the cantonment laboratory.

Dr. R. M. Means, Midway, Lieut., M.R.C., has been ordered to Fort Ethan Allen, Vt., as drill master and instructor for hospital corps.

Dr. M. Flexner, Louisville, Lieut., M. R. C., has been ordered to Camp Taylor, Louisville, for laboratory work.

Dr. O. R. Miller, Louisville, Lieut., M. R. C., has been ordered to Washington for duty.

Dr. E. C. Brandon, Elizabethtown, Dr. H. T. Alexander, Fulton, and Dr. S. B. Casebolt, Pikeville, Lieuts., M. R. C., have been ordered to Syracuse, N. Y.

Dr. Milton Board, Louisville, Major, M. R. C., has been ordered to Louisville for duty.

Dr. P. H. Stewart, Paducah, Captain, M. R. C., has been ordered to Louisville as chief of surgical service.

Dr. E. Moorman, Harned, Lieut., M. R. C., has been ordered to Louisville for duty.

Dr. J. W. Galvin, Louisville, Lieut., M. R. C., has been ordered to Fort Sill, Okla., for instruction in gas defense.

Dr. W. E. Baxter, Louisville, Lieut., M. R. C., has been ordered to Garden City, N. Y., for duty with Twenty-sixth Division, National Guard.

Dr. R. M. Taylor, Naceo, Captain, M. R. C., has been ordered to Houston, Texas, for duty.

Dr. John Hunter Peak, Louisville, was married to Miss Emily H. Myers, also of Louisville, on August 8.

The Davies County Medical Society held its regular quarterly meeting at Owensboro, Tuesday, September 18.

The Christian County Medical Society at its last meeting authorized the purchase of Liberty Bonds.

Dr. John H. Blackburn, Bowling Green, Major, M. R. C., is chief of the surgical division of the cantonment hospital at Camp Logan, Texas.

Dr. Benj. F. Van Meter, Lexington, has been commissioned a Major in the Medical Corps of the Army. He was in service as an Army surgeon throughout the Spanish-American War.

The John Graves Ford Memorial Hospital, Georgetown, has been opened to the public.

The Y. M. C. A. of Louisville has established a health school. Every member will be examined in order to find out just what exercise is needed.

Dr. W. Ed Grant, City Health Officer of Louisville, has announced that Dr. H. F. Smith, U. S. P. H. S., will assist the City Health Department in making a careful study of every case of typhoid fever and other infectious diseases.

Dr. Frank Boyd, Paducah, has been named by the Postmaster General as surgeon for Paducah employees

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under civil service. The Riverside Hospital has been named the official hospital for all injured employees.

Among those who have offered for service and been commissioned in the Medical Reserve Corps may be mentioned: Drs. J. Garland Sherrill, John W. Pryse, W. B. Doherty, Harris Kelly, Virgil Kortrand, Louisville; Dr. S. S. Elrod, Jeffersonville; Dr. C. E. Harkey, Paducah; Drr. Harman Nash, Finchville; Dr. Hodge Yeaman, Henderson; Dr. J. A. Austin, Fulton; Dr. R. W. Porter, Georgetown; Dr. N. C. West, Frankfort; Dr. Scott Goodpaster, Owingsville; Dr. H. E. Prather, Hickman; Dr. C. P. Price, Harrodsburg; Dr. Irl Thomas, Pembroke; Drs. Chas. M. Gower, Clinton; M. M. Moss, Bowling Green; Stanley Stroube, South Christian; J. E. Wilson, Butler; Robert T. Pirtle, Louisville; W. H. Jefferson, Cadiz; R. W. Ogilvie, Princeton; Carroll Price, Harrodsburg; Carl Norlleet, Somerset; J. A. Bolin, Somerset; S. F. Parker, Somerset; Drs. H. V. Johnson, Georgetown; G. H. Beckett, Sunrise; J. P. Wheeler, Carrollton; F. I. Buckner, Campbellsville; Sam R. Guthrie, Franklin.

Dr. Delia Caldwell, Paducah, offered her services in the Medical Reserve Corps, but has been advised that for the present women physicians will not be accepted. She is the only female physician in Western Kentucky to offer her services.

Dr. Lydia Poage, Paris, will serve her country with the base hospital unit being raised in Lexington by Dr. Barrow.

Deaths

Dr. T. P. Satterwhite, Louisville, aged 82, died recently.

Dr. J. A. H. Miller, Princeton, aged 57, died unexpectedly at a Louisville hospital on June 8.

Dr. B. Ramsey, Richmond, aged 92, died July 18.

Dr. Samuel Meyer, Louisville, aged 48, died August 17 from cerebral hemorrhage.

Dr. Fred H. Hart, Louisville, aged 55, died August 11 from uremia.

LOUISIANA

Dr. J. J. Robert, Baton Rouge, Captain, M. R. C., has been ordered to Little Rock for duty in the cantonment laboratory.

Dr. E. J. Huhner, New Orleans, Lieut., M. R. C., has been ordered to Fort St. Philip for duty.

Dr. F. S. Furman, Shreveport, Lieut., M. R. C., has been order to Fort Sill, Okla., for instruction in gas defense.

Dr. Ralph C. P. Truitt, Jackson, Lieut., M. R. C., has been ordered to Fort Riley, Kan.

Dr. Louis V. J. Lopez, New Orleans, Lieut., M. R. C., has been ordered to Fort D. A. Russell, Wyoming.

Dr. Isadore Dyer, Major, and Dr. William M. Perkins, Lieut., M. R. C., New Orleans, have just completed an itinerary of the state in the health car of the State Board of Health for the purpose of stimulating interest in the Medical Reserve Corps and conducting examinations for that service. Major Dyer is President of the Examining Board.

The Seventh Congressional District Medical Society met in Opelousas, Tuesday, August 28. Crowley was selected as the next meeting place.

Dr. Rhett Goode Korniker, McNary, was married to Miss Elizabeth Gotey, of Houston, Texas, early in August.

The Louisiana State Board of Medical Examiners has added Alabama to the list of states with which she reciprocates.

The State Board of Health has made a survey of Shreveport endeavoring to determine the source of typhoid fever.

New Orleans reports 176 cases of active diphtheria up to the middle of September. The Medical Department of the School Board is working in conjunction with the City Board of Health to prevent further spread of the disease.

The City Board of Health of Alexandria was recently organized, with Dr. J. A. White as President.

Dr. E. W. Shultz, Alexandria, who is the representative of the State Board of Health in sanitation work in Rapids Parish, will soon go to France as head of the Pathological Department of the Maryland University Base Hospital Unit. Dr. R. S. Crichlow will succeed him in the parish sanitation work.

Dr. J. A. Wilkinson, Homer, has been commissioned in the Medical Corps of the Army and stationed at Camp Beauregard, near Alexandria.

Death

Dr. Delphin Bienvenu, New Orleans, aged 81, died September [illegible].

MARYLAND

Dr. J. R. Oliver, Baltimore, Lieut., M. R. C., has been ordered to Admiral for duty in the cantonment laboratory.

Dr. P. F. Sappington, Bel Air, Lieut., M. R. C., has been ordered to Camp Meade for duty.

Dr. D. P. Peters, Baltimore, Lieut., M. R. C., has been ordered to Montgomery, Ala., for duty as chief of the surgical service at the base hospital.

Dr. Edward A. Looper, Baltimore, Lieut., M. R. C., has been ordered to report at Fort Oglethorpe, Ga., for a course of instruction.

Dr. E. S. Linthicum, Baltimore, Major, M. R. C., has been ordered to report to Fort Sill, Okla., for a course of instruction in gas defense.

Dr. C. H. Conley, Frederick, Captain, M. R. C., has been ordered to report to Garden City, N. Y., for duty.

Dr. T. M. Shorkley, Kensington, Captain, M. R. C., has been ordered to Syracuse, N. Y., for duty.

Dr. J. M. Zimmerman, Williamsport, Lieut., M. R. C., has been ordered to Syracuse, N. Y., for duty.

Dr. T. C. Janeway, Baltimore, Major, M. R. C., has been ordered to Washington, D. C.

Drs. Wm. R. Johnson and R. W. Johnson, Baltimore, twin brothers, have recently been commissioned in the Medical Reserve Corps.

Dr. Hans Hohn, Baltimore, who has been associated with the Mercy Hospital, is now with St. Joseph Hospital, Lancaster, Pa.

Dr. Henry M. Hampton, Baltimore, has assumed his new duties as chief resident physician of the Hebrew Hospital. He succeeds Dr. M. B. Leavin, who has entered private practice.

Health Commissioner Blake, Baltimore, has appointed Dr. Edgar Fay assistant resident physician at Sydenhan Hospital.

Dr. Cary B. Gamble, Baltimore, has been commissioned Major in the Medical Reserve Corps and appointed on the medical staff at Camp Meade.

Dr. W. J. Coleman, Baltimore, Captain National Guard, was recently married to Miss Laura S. Chaplin, also of Baltimore.

Dr. Gerald Shelby, Baltimore, Assistant Surgeon, U. S. Navy, was married to Miss Florence Hawes, of Bainbridge, Ga., on August 18.

Dr. Arthur M. Shipley, Professor of Surgery, University of Maryland, has been made chief of the surgical staff of the University base hospital unit and ordered to report to Camp Meade as chief surgeon and surgical instructor.

Dr. Thomas B. Futcher, Baltimore, will sail soon for England to take charge of the Canadian Military Hospital. He was visiting physician at Johns Hopkins and a member of the staff of the Medical School.

Mrs. Wm. S. Thayer, wife of Dr. Wm. S. Thayer, Baltimore, died August 29 at the home of her niece at Pikeville. Dr. Thayer is now in Russia.

Dr. Harry F. Shipley, Granite, Health Officer of the Second District of Baltimore County, had his collar bone broken, his nose lacerated and his body badly bruised recently when his automobile turned turtle. He was taken to the hospital in an unconscious condition, but is rapidly recovering.

Dr. P. Hamilton Lloyd, Ridge, recently underwent an operation at Mercy Hospital.

Dr. Wm. W. Eichelberger, Baltimore, has been commissioned a Captain, M. R. C. He will assist the National Committee on Mental Hygiene to form a unit of neurologists and psychiatrists.

The North Atlantic sectional conference of the National Association for the Study and Prevention of Tuberculosis will be held in Baltimore, October 17 and 18. Plans will be laid for an intensive campaign to prevent the spread of tuberculosis.

Dr. Joseph I. France, Baltimore, was recently elected to the United States Senate.

The Maryland hospital train, which was fitted out under the direction of Dr. D. Z. Dunott, Chief Surgeon of the Western Railroad, in connection with the Baltimore and Ohio Railroad and Pennsylvania Railroad, was recently sent to Washington to be inspected by the Medical Corps of the Army in the war college.

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Obstinate Constipation of Infants and Young Children

is usually a dietetic affair, but is sometimes due to lack of muscular tone.

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Dr. Archibald C. Harrison, Baltimore, has been appointed director of the Maryland University base hospital unit.

Dr. Harry C. Houck has been appointed substitute [illegible]

Dr. Thomas R. Chamber, Baltimore, Captain, M. R. C., [illegible] Evacuation Hospital to be established in France.

Dr. Samuel W. Shannon, Baltimore, has been commissioned 1st Lieut., M. R. C., and has been called into active service.

Dr. Wm. K. White, Baltimore, has been commissioned as a Captain, M. R. C.

Dr. Jerome K. Webster, Baltimore, has been commissioned a 1st Lieut., M. R. C., and will soon report for active service.

Dr. Horace B. Titlow, Baltimore, Lieut., M. R. C., has reported at Fort Oglethorpe, Ga., for duty.

Dr. J. W. Vinton Clift, Baltimore, has been commissioned a 1st [illegible] M. R. C., and has reported at New York for active duty.

Deaths

Dr. Edward Anderson, Rockville, aged 76, died August 15.

Dr. Robert S. Corse, Sr., Baltimore, aged 79, died August 23.

Dr. Charles C. Billingslea, Westminster, was accidently shot and killed at Camp Meade while examining one of the new Army officer's revolvers on August 16.

MISSISSIPPI

Dr. R. T. O'Neil, Vicksburg, Lieut., M. R. C., has been ordered to Little Rock, Ark., for duty.

Dr. B. J. Marshall, Agricultural College, Captain; Dr. J. T. Barbee, Ripley, Captain; Dr. V. N. Nichols, Carson, Lieut.; Dr. T. J. Bush, Clarksdale, Lieut.; Dr. V. H. Bean, Smithville, Lieut., and Dr. Z. C. Hagan, Union, Lieut., have been ordered to Syracuse, N. Y., for regimental duty.

The King's Daughters Hospital, Greenwood, is rapidly nearing completion.

Dr. Jos. W. Hough, Jackson, has purchased and given to Young Women's Business Club two houses on adjoining lots to be used as homes for working girls. The purchase price was $20,000.

Dr. Henry Bo well, Booneville, is temporarily in charge of the State Tuberculosis Sanatorium at Magee.

Dr. R. W. Hall, registrar of vital statistics of the State Board of Health, recently visited Hattiesburg to confer with Dr. J. T. Mounger, City and County Health Officer, to consider the appointment of a registrar of vital statistics for Camp Shelby.

Dr. J. A. Watkins, Director Public Health, is conducting a vigorous campaign to make the territory between Hattiesburg and Camp Shelby sanitary. He has recently made an inspection and served notice upon all whose premises were not in the condition required by law.

MISSOURI

Dr. A. A. Gossow, St. Charles, Captain, M. R. C., has been ordered to Fort Sill for instruction in gas defense.

Dr. J. C. Morfit, St. Louis, Captain, M. R. C., has been ordered to Waco, Texas, for duty as chief of the surgical service of the base hospital.

Dr. W. J. Frick, Kansas City, Major, M. R. C., has been ordered to Camp Custer, Battle Creek, Mich., for duty as chief of the surgical service.

Dr. A. E. Strauss, St. Louis, Lieut., M. R. C., has been ordered to Camp Meade, Annapolis Junction, Md., for duty as assistant to chief of the medical service in the care of cardiovascular cases.

Dr. D. E. Singleton, Clarence, Lieut., M. R. C., has been ordered for duty to Des Moines, Ia.

Dr. J. C. Edwards, O'Fallon, Lieut., M. R. C., has been ordered for duty to Fort Benjamin Harrison.

Dr. Samuel R. Johnson, St. Charles, Lieut., M. R. C., has been ordered for duty to Fort Riley.

Dr. C. L. Woolsey, Chillicothe, Lieut., M. R. C., has been ordered for duty to Linda Vista, Cal.

Dr. F. E. Woodruff, St. Louis, Lieut., M. R. C., has been ordered to Mount Clemens, Mich., Flying School for duty.

Dr. J. F. Binnie, Kansas City, Major, M. R. C., has been ordered to Washington, D. C., for duty.

Dr. G. Seelig, St. Louis, Major, M. R. C., has been ordered for duty in connection with the brain section of surgery of the head at Washington, D. C.

The Medical Society of Missouri Valley held its thirtieth annual meeting in Lincoln, Neb., September 20-21. Dr. Chas. R. Woodson, St. Joseph, is President, and Dr. Chas. Wood Fassett, Kansas City, is Secretary.

In our September issue we credited Dr. Geo. Dock, of St. Louis, Professor of Medicine, Washington University, with the honor of having received the French war cross for service in moving the wounded soldiers under fire while with the American Field Ambulance Service. Dr. Dock has not been in France. This honor was conferred upon his son, who is not a doctor, but is in service with an ambulance corps. Since then another son, who is in France, has also received a French cross for bravery under similar conditions.

Dr. Harold A. Elkins, Hardin, was married to Miss Esther Jane Orr, of Mount Carmel, on August 15.

Dr. Harry T. Evans, St. Louis, was recently appointed house physician for the Missouri State Sanatorium, Mt. Vernon.

Dr. John W. Stewart and Dr. Herbert F. Langsdorf, St. Louis, were recently appointed resident surgeons of the City Hospital.

Dr. Raymond C. Schaffer, St. Louis, Dean of Washington University Medical School; Dr. Guy L. Noyes, Columbia, Dean of University of Missouri Medical School; Dr. Geo. H. Jones, Jefferson City, Secretary of the State Board of Health; Dr. Wm. C. Coughlin, St. Louis, and Dr. Herman E. Pearse, Kansas City, have been appointed a committee on public health by the chairman of the Missouri Council of Defense.

Dr. Jesse L. Eaton, Bismarck, was recently appointed superintendent of State Hospital No. 4 at Farmington.

Dr. C. E. Wilson, Kansas City, Major, Medical Reserve Corps, was recently selected as surgeon of the Second Missouri regiment of artillery.

Dr. V. R. Wilson, St. Joseph, was recently appointed police surgeon.

Dr. M. J. Seelig, Major, M. R. C., Profressor of Surgery, St. Louis University Medical School, and chief surgeon to the Jewish Hospital, was recently ordered to Washington to assist in organizing Army surgical work.

Dr. O. H. Campbell, St. Louis, Major, M. R. C., has been ordered to Waco, Texas, as chief of the medical service at the cantonment hospital.

Dr. H. S. Crossen, Captain, and Dr. T. P. Brooks, Lieut., M. R. C., St. Louis, are with the Twelfth Engineers regiment, and announced their safe arrival in England.

Dr. R. S. Bryan, Captain, M. R. C., St. Louis, has been ordered for service in Hawaii.

Dr. Geo. W. Human and Dr. Jos. C. Schafer, St. Louis, Lieuts, M. R. C., were recently ordered to Camp Funston.

Deaths

Dr. John E. Connell, Marshall, aged 52, died August [illegible].

Dr. Wm. Thomas Fitzsimmons, Kansas City, 1st Lieut., M. R. C., U. S. Army, aged 28, was killed by the explosion of a bomb dropped from a German airplane September 8. He was adjutant of the Harvard base hospital unit now in service in France. His is the first death of an American medical officer in the war with Germany.

Dr. Hugo Kinner, St. Louis, aged 77, died September 12.

Dr. B. W. J. Worrall, Kansas City, aged 38, was killed in an automobile accident at North Towanda, N. Y., on September 15.

NORTH CAROLINA

Dr. W. J. McAnally, High Point, Lieut., M. R. C., has been ordered to Camp Greene, Charlotte, N. C., for duty.

Dr. J. Thames, Wilmington, Lieut., M. R. C., has been ordered for duty to Fort Ethan Allen, Vt., as drill master and instructor for hospital corps.

Dr. H. H. Ogburn, Greensboro, Lieut., M. R. C., has been ordered to Fort Worth, Texas, for duty as Roentgenologist.

Dr. W. Allan, Charlotte, Captain, M. R. C., has been ordered to Fort Ethan Allen, Vt., for duty.

Dr. A. S. Pendleton, Raleigh, Lieut., M. R. C., has been ordered to Macon, Ga., for duty.

Dr. James E. Stokes, Salisbury, Captain, M. R. C., has been ordered to report in person to the command-

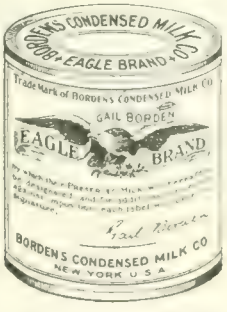
(Continued on page 34)

Digestive Disturbances

in infants can usually be traced to faulty or improper food. These disagreeable conditions are successfully overcome by prescribing

Gail Borden EAGLE BRAND CONDENSED MILK
THE ORIGINAL

which is made from the highest quality of raw materials by the most modern and sanitary methods of manufacture guaranteeing a finished product—that at all times is clean, wholesome and dependable for Infant Feeding.



Samples, Analysis, Feeding Charts on any scale, and [illegible] page book, "Baby" [illegible] will be mailed [illegible] receipt of professional card.

Borden's Condensed Milk Company
"Leaders of Quality"
Est. 1857
NEW YORK

25% Bran

In a Delightful Breakfast Dainty

The bran in Pettijohn's is flake bran—the most efficient form.

It is hidden in soft rolled wheat, which everybody likes.

These flavory flakes have for decades formed a favorite morning dish. Now we make it extra-rich in bran, to meet a wide requirement.

You will find, we think, no other bran food so adapted to continuous use. The bran is not conspicuous. And rolled wheat is something of which nobody tires.

Pettijohn's

Rolled Wheat—25% Bran

A breakfast dainty whose flavory flakes hide 25 per cent unground bran.

Pettijohn's Flour—75 per cent fine patent flour with 25 per cent bran flakes. Use like Graham flour in any recipe.

Both sold in packages only.

(1651)

(Continued from page 33)

... of the hospital ... at Newport News, Va.

... at Camp Greene, Charlotte, will ... Dr. W. L. Sheep, Major, Medical Corps. There will be about 250 enlisted men in this hospital unit.

The trustees of the Presbyterian Hospital, Charlotte, have purchased the Elizabeth College buildings and twelve acres of ground surrounding them. The purchase price was $175,000. It is said that something like $20,000 will be spent immediately on these buildings ...

Dr. E. J. Buchanan, Lexington, who has been a member of the Davidson County Highway Commission for several years, has tendered his resignation.

Dr. Samuel W. Rucker, ... to Miss Louise Evans Watkins, Flagstaff, Arizona, August 21.

Dr. W. E. Wishart is another Charlotte physician to answer the call for service. He has been commissioned a Lieutenant.

Deaths

Dr. John Thomas Hiatt, Asheville, aged 50, died May 29 from nephritis.

Dr. Robert McDowell Reid, Gastonia, aged 52, died August 14 from angina pectoris.

OKLAHOMA

Dr. C. E. Lee, Oklahoma City, Lieut., M. R. C., has been ordered to Camp Travis, Fort Sam Houston, Tex., for duty.

Dr. Paul R. Siberts, Cooperton, Lieut., M. R. C., has been ordered to Fort Riley for a course of instruction.

Dr. D. A. Gregory, Ardmore, ... M. R. C., has been ordered to Fort Sam Houston, Texas, for duty.

Dr. Burton Fain, Frederick, Lieut., M. R. C., has been ordered to report by telegraph to commanding general, Southern Department, for duty.

The city of Okmulgee will erect a municipal hospital. Bids were recently opened.

The State Baptist Association of Oklahoma will erect a Baptist hospital to cost $70,000 at Miami.

Dr. Bruce Watson, Health Officer of Noble County, has condemned the municipal water supply of Perry.

Dr. J. R. Allen, Caddo, was married to Miss Lotta M. Ferguson at McKinney, Texas, on June 26.

Dr. J. C. Watkins, Checotah, has offered to build a hospital if the Commercial Club will raise a bonus of $1,500.

Dr. J. M. Costello, Oklahoma City, will be Health Officer of Oklahoma County during the absence of Dr. A. E. Davenport, now in Army service.

Dr. John W. Duke, Guthrie, Dr. Fred S. Clinton, Tulsa, and Dr. F. B. Fite, Muskogee, have been appointed on the district exemption board of their districts.

Dr. Ross D. Long, Oklahoma City, who saw service in France with the Twenty-third British Expeditionary Hospital, has received a commission in the Medical Corps and ordered to Fort Riley for service.

Dr. Frank P. Davis, Enid, has announced that he will enter the race for the Democratic nomination for Governor in the 1918 primary.

Dr. Rex G. Bolend and Dr. A. S. Guthrie, 1st Lieuts., M. R. C., have just completed an itinerary in the state of Oklahoma in the interest of the Medical Reserve Corps and to conduct examinations for physicians desiring commissions.

Dr. C. E. Collins, Gould, is convalescent from an operation for appendicitis.

Dr. W. E. Van Cleave, agent Federal Department of the Interior, stationed at Talihina, is authority for the statement that trachoma, tuberculosis and malaria are making heavy inroads upon the Indians. He has asked the co-operation of the State Department of Health to assist in the prevention and spread of these diseases.

Among those who have volunteered for service in the Medical Reserve Corps may be mentioned Dr. R. Culberson, Hoyt; Dr. R. C. McCreery, Erie; Dr. Carl Puckett, Pryor; Dr. C. R. McDonald, Broken Arrow; Dr. Ernest Nunnery, Granite; Dr. W. B. Newton, Muskogee; Dr. H. W. Callahan, Collinsville; Dr. A. E. Davenport, Dr. Ross D. Long, Dr. George Hunter, Oklahoma City; Drs. C. L. Wellman, Geo. C. Bryan, R. L. Westover, Okmulgee; L. L. Bunker, B. T. Bitting, Enid; P. F. Herod, El Reno; W. W. Rucks, Eufaula; W. E. Harrington, Wakita; D. E. Little, Eufaula; H. McQuown, Stillwater; G. S. Barber, Lawton; W. B. Newton, Muskogee; F. C. Myers, Broken Arrow; T. J. Palmer, North McAlester; R. L. Holt, Mangum; S. R. Evans, Stilwell; H. E. Yazel, Bartlesville; W. M. Tucker, Sulphur; J. G. Thomas, Alluwe; A. B. Montgomery, Checotah; J. L. Day, Norman; Burton Fain, Frederick; Orange W. Starr, Claremore; William P. Sims, C. D. Blachly, Drumright; J. V. Athey, Bartles-...

Deaths

Dr. Samuel G. Wishard, Watonga, aged 74, died early in August after a short illness.

... August 6.

SOUTH CAROLINA

Dr. L. Petera, Columbia, Lieut., M. R. C., has been ordered to Fort Sill, Okla., for a course of instruction in gas defense.

Dr. G. F. Klugh, Cross Hill, Lieut., M. R. C., has been ordered to Columbia, S. C., for duty in the cantonment laboratory.

Dr. T. R. W. Wilson, Greenville, Lieut., M. R. C., has been ordered to Hattiesburg, Miss., for duty in the cantonment laboratory.

Dr. C. B. Earle, Greenville, Captain, M. R. C., has been ordered to Spartanburg, S. C., for duty at base hospital as chief of the surgical service.

The State Board of Health is doing its patriotic duty in this time of national stress. Every one of its members is connected with some governmental department or organization. Dr. Robert Wilson, Jr., Chairman, is a member of the Eastern District exemption board; Dr. E. A. Hines, Western District exemption board; Dr. C. C. Gambrell, Abbeville exemption board; Dr. D. B. Frontis, Saluda exemption board; Dr. Wm. Eggleston, Darlington exemption board; Dr. Wm. Burdell, 1st Lieut., and Dr. F. L. Parker, Major, are stationed at Flort Oglethorpe; Dr. F. A. Coward, Director of Laboratory, 1st Lieut., is a member of the Board of Examiners for Medical Reserve applicants; Dr. J. A. Hayne, Secretary and State Health Officer, holds a commission as 1st Lieut.

Dr. Roy L. Leak, formerly Superintendent of the Syracuse (N. Y.) City Psychopathic Hospital, has assumed control as medical director of the S. C. Hospital for the Insane, Columbia, succeeding Dr. Wm. C. Sandy, resigned.

Newberry County Medical Society at a recent meeting adopted a resolution to the effect that each member who should answer the call for service in the Army should receive one-third of the fees collected from his patients.

Dr. F. B. Sanders and Dr. R. L. Gardner, of the Chesterfield County Medical Society, have passed their examinations for Medical Reserve Corps officers.

Dr. W. L. Bryson, Greenville, and Dr. Chas. L. Goodwin, Charleston, have been commissioned Lieuts. in the Medical Reserve Corps.

Recently twenty members of the active staff of the City Hospital of Greenville resigned as a protest to the action of the Board of Governors in electing to the staff a physician who did not have the indorsement of the staff.

TENNESSEE

Dr. J. S. Fleming, Memphis, Lieut., M. R. C., has been ordered to Columbia, S. C., for duty in the cantonment laboratory.

Drs. K. M. Buck and S. E. Frierson, Memphis, Lieuts., M. R. C., have been ordered to Fort Oglethorpe for duty with Hospital Unit P.

Dr. C. M. Banks, Springfield, Lieut., M. R. C., has been ordered to Fort Thomas, Ky., for duty.

Dr. C. M. Gloster, Brownsville, Lieut., M. R. C., has been ordered to Fort Des Moines, Iowa, for duty.

Dr. W. B. Malone, Memphis, Major, M. R. C., has been ordered to Fort Oglethorpe for training with Hospital Unit P.

Dr. Polk D. Brown, Irving College, Lieut., M. R. C., has been ordered to Fort Riley for a course of instruction.

Dr. L. A. Stone, Memphis, Captain, M. R. C., has been ordered to Fort Sill, Okla., for a course of instruction in gas defense.

Dr. T. B. Givan, Nashville, Lieut., M. R. C., has been ordered to Syracuse, N. Y., for regimental duty.

Dr. A. H. Wittenborg, Memphis, has been appointed

(Continued on page 36)

TEMPERED GOLD Hypodermic Needles

possess the rigidity of steel without its brittleness or tendency to break.

A Distinct Advance in Hypodermic Asepsis

Rust-proof, germ-proof, acid-proof. Can not corrode under any conditions, climatic or otherwise. Durability practically unlimited. Sterilizable by all usual methods without injury.
One needle used for over 7,000 mercurial injections is still in perfect condition. An obvious economy.

If not obtainable of your dealer, we will send you a sample needle for $1.00, or a half dozen assorted sizes, up to one inch, for $4.50, post-paid.

Precious Metals Tempering Co.
WHITESTONE, L. I., N. Y.

Use Vaccines in Acute Infections

The early administration of Sherman's Bacterial Vaccines will reduce the average course of acute infections like Pneumonia, Broncho-pneumonia, Sepsis, Erysipelas, Mastoiditis, Rheumatic Fever, Colds, Bronchitis, etc., to less than one-third the usual course of such infectious diseases, with a proportionate reduction of the mortality rate.

Sherman's Bacterial Vaccines are prepared in our specially constructed Laboratories, devoted exclusively to the manufacture of these preparations and are marketed in standardized suspensions.

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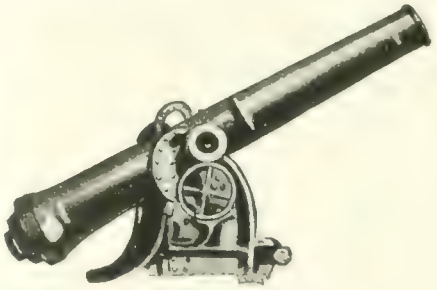
G. H. SHERMAN, M.D.
Detroit, Mich. U.S.A.



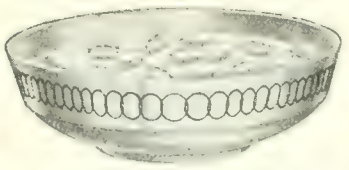
Foods Shot From Guns

Puffed Wheat and Puffed Rice are steam-exploded grains, puffed to eight times normal size.

The grains are sealed in guns, and revolved for an hour in terrific heat. When all the inner moisture is changed to steam, the guns are unsealed and the steam explodes. Thus every food cell is blasted.

No other cooking process, we think, breaks up half so many food cells. No other process so fits these grains for food. And in no other form are these grains so inviting as these flaky, airy bubbles, crisp and fragile, with a nut-like taste.

The Quaker Oats Company
Chicago



(1653)

Puffed Wheat **Puffed Rice**
and Corn Puffs
Each 15c Except in Far West

(Continued from page 34)

Dean of University of Tennessee College of Medicine. The regular session began November 1st.

Dr. R. L. Sanders, formerly Assistant Surgeon St Mary's Hospital, Mayo Clinic, Rochester, Minn., has been appointed to the Executive Building, Memphis, having his practice in that city.

Dr. Joel Jesse White, Assistant Surgeon, U. S. Navy, was married to Miss Ina Virginia Armistead, both of Nashville, on August 28.

Dr. Robert Lyle Motley was married to Miss Celia Mary Calcutt, both of Dyersburg, August 29.

Dr. Henry L. Douglas and Dr. F. B. Daddis, Nashville, 1st Lieuts., M. R. C., sailed early in September from an American port for active service in France.

Dr. John W. Morris, Summerville, 1st Lieut., M. R. C., is the first Tennessee surgeon to arrive at the fighting front in France.

Dr. John B. Steele, Chattanooga, 1st Lieut., M. R. C., has been transferred from Fort Riley, Kansas, to Little Rock, Ark., and placed in charge of the ambulance corps.

Dr. S. S. Crockett, Nashville, suffered a fractured hip when he fell recently in the transfer station. The reports from the Woman's Hospital, where he was taken, are that he is doing well.

Dr. L. L. Lumsden, Surgeon, U. S. Public Health Service, has made a survey of the typhoid fever situation in Chattanooga and has reported his findings to the State Board of Health and also the City Board of Health.

Dr. Marcus Haase, Memphis, has been in Washington, representing the University of Tennessee, School of Medicine, in bringing before Provost General the necessity of exempting from military service medical students.

The pre-medical department of the University of Tennessee will in the future be at Knoxville, with Dr. S. D. Moreland, Dean, and Dr. T. P. Nash, Assistant Professor of Chemistry.

For the first time in its history the Memphis and Shelby County Medical Society held a meeting recently outside the city of Memphis, when on September 4 they met in Whitehaven. Dr. J. L. Andrews and Dr. William Krauss discussed public health subjects.

Among those who have answered the call for service in the M. R. C. may be mentioned Drs. Herbert Acuff, Knoxville; Sam Hardeman, Nashville; Dabney Minor, Cleveland; Miles W. Barnes, Cedar Hill; T. W. Rhodes, Whiteville; J. M. Ballew, Memphis; J. P. Delaney, Arrington; D. T. Austin, Bogota; B. C. Arnold, Jackson; L. M. Dykes, Johnson City; Ludlow Lambdin, Knoxville; E. S. Turner, LaFollette; W. S. Nash, T. Ap. R. Jones, R. M. Young, Reese Patterson, B. V. Howard, Walter Luttrell and B. N. Ogle, Knoxville; C. E. Barnett, Newport; J. M. Lee, Nashville; O. J. Porter, Columbia; Eugene Orr, Nashville; P. H. Faucette, Columbia; W. C. Dixon, Nashville; T. A. Mitchell, Nashville; S. E. Brinson, Memphis; Geo. C. Williamson, Nashville; Harlin Tucker, Nashville; A. R. Porter, Jr., Memphis; R. L. Dossett, Tullahoma; C. M. Banks, Springfield; Sam W. Donaldson, Maryville; Max Kaplan and L. L. Keller, Memphis; W. R. Arrants, Nashville; D. L. Haggerty, Unionville; C. M. Beck, Memphis; L. E. Desprez, Memphis; Samuel Wadley, Memphis; W. M. Blackmore, Lucy.

Dr. J. R. Nankivell, Athens, Major, M. R. C., has been made Sanitary Inspector of Camp Sevier, Greenville, S. C.

Deaths

Dr. Thomas A. Allen, Berlin, aged 79, died August 14.

Dr. Robert H. Carter, Lynnville, aged 70, died July 29.

Dr. Z. T. Martin, Memphis, aged 70, died August 25 from an attack of asthma.

Dr. Geo. M. Dayton, Chattanooga, aged 68, died August 28.

TEXAS

Dr. W. C. Bergfield, Sequin, Lieut., M. R. C., has been ordered to Fort Riley for a course of instruction.

Dr. R. L. Davis, Big Springs, Lieut., M. R. C., has been ordered to Petersburg, Va., for duty.

Dr. W. T. Harris, San Antonio, Lieut., M. R. C., has been ordered to report in person to commanding general, Southern Department, for duty.

Dr. C. C. Odom, Childress, Lieut., M. R. C., has been ordered to Camp Custer, Battle Creek, Mich., for duty.

Dr. J. C. Flynn, Galveston, Captain, M. R. C., has been ordered to Fort Worth, Texas, for duty in the cantonment laboratory.

Lieut. J. F. Stout, Denison, Lieut. E. H. B. Steele, Deport, Lieut.; H. D. Fillmore, Maryneal, Lieut.; M. O. [illegible] Lieut. C. O. Terrell, Ranger, Lieut. [illegible] Lieut. Vaughan, G. H. Green, Del Rio, J. M. O'Farrell, Richmond; J. M. Bannister, Snyder; Lieuts. J. H. Walker, Alvard; J. D. Motheral, Angleton; F. E. Hudson, Anson; C. H. Tindall, Appleby; W. E. Watt, Austin; C. L. Monk, Austwell; O. E. Egbert, Beeville; L. F. Putnam, Blessing; M. L. Fuller, Bradshaw; W. F. Chambers, Bronte; W. C. Weir, Buckholts; A. J. Evans, Caddo; D. M. Speer, Celina; M. M. Risinger, Chalk Mt.; W. A. Warner, Claude; J. M. Trible, Cuero; J. H. Erwin, Dallas; M. M. Morrison, Denison; E. W. Brethan, Denton; V. V. Clark, Estelline; H. F. Wilkins, Fort Worth; B. F. Smith, Jr., Galveston; J. C. Dobbs, Ganado; D. F. Gray and G. Miller, Gause; W. T. Daws and J. A. Maness, Gonzales; M. L. Stricklin, Gustine; F. W. Carruthers, Hillsboro; W. N. Shaw, Houston; H. L. D. Jenkins, Hughes Springs; G. L. Langworthy, Lakeview; O. P. Goodwin, Lamasco; N. C. Boethel, Leroy; A. Nowlin, Liberty Hall; O. A. Smith, Mansfield; R. L. Hamilton, Matador; H. E. Luehrs, Mathis; R. E. Pridgen, Oakland; I. A. Dix, Otto; J. W. Harrison, Palacios; G. W. Wilhite, Palestine; W. A. Jennings, Park Spring; H. A. White, Raymondville; R. R. Allen, Roby; A. G. Neighbor, Rosenberg; W. M. Johnson, Rosston; R. A. Olive, San Angelo; W. J. Vinsant, San Benito; D. R. Aves, Seabrook; R. W. Horton, Smiley; H. W. Gough and R. L. Kimmins, Temple; J. J. Livingston, Tyler; E. Toomim, Waco; O. P. Sweatt, Waxahachie, and D. L. Sanders, Wills Point, have been ordered to report by telegraph to commanding general, Southern Department, for duty.

Dr. J. E. Thompson, Galveston, has been granted a final naturalization paper. He is now an American citizen. He was formerly a British subject.

The South Texas District Medical Society will hold its forty-second semi-annual meeting at Beaumont in October.

Dr. R. S. Sutton, Bartlett, who has spent some time in a hospital corps of the English Army, has returned home.

The Dallas County Medical Society has resumed its monthly meetings after its usual summer vacation.

Dr. W. S. Carter, Dean Medical Department, University of Texas, has announced the opening of the medical school October 1.

Jefferson County (Beaumont) Commissioners Court has appropriated funds for a health survey of the county.

Dr. E. H. Cary, Dean, Baylor Medical College, has announced the receipt of commissions of twelve Dallas physicians who were members of the Baylor Base Hospital Unit No. 5.

The sanitary survey and health campaign, which has been carried on in Dallas County under the direction of the Commissioners Court, the State Health Board and the International Health Commission, has revealed much valuable information to enable the health authorities to protect the health of Dallas county citizens.

Dr. J. Allen Kyle, Houston, from "Somewhere in France" writes that "Sherman was right."

Thirty-six physicians from Houston have answered the call for service in the Army and Navy Medical Corps.

Dr. Snead Strong, Dallas, and Dr. Frank Sanders, Fort Worth, 1st Lieuts., M. R. C., have been appointed examiners for Medical Reserve Corps applicants for North Texas.

The physician members of the district exemption boards for Texas are: Dr. Wm. E. Howard, Dallas, Northern district; Dr. Sidney J. Smith, Houston, Southern district; Dr. E. D. Blalock, Woodlawn, Eastern district; Dr. C. W. Goddard, Holland, Western district.

The following members of the faculty of the Fort Worth School of Medicine, Medical Department, T. C. U., have been ordered to active service: Dr. Holman Taylor, Lt. Col.; Dr. Frank B. Sanders, Lieut.; Dr. John B .Hawley, Major; Dr. Will S. Horn, Lieut.; Dr. Giles W. Day, Lieut., and Dr. Harry Logsdon, Lieut.

Among the Texas physicians who have answered the call for service may be mentioned Dr. T. R. Seally, Santa Anna; Dr. J. T. Bernard, Dallas; Dr. S. Ross Jones, Waco; Dr. E. W. Brenhan, Denton; Dr. E. Toomin, Waco; Drs. R. S. Farrister and J. C. McKean, Fort Worth; Dr. R. H. McLeon, Palestine; Dr. John V. Blake, Floresville; Dr. Armond V. Cox, Dallas; Dr. H. E. Luehr, Mathis; Dr. C. H. Brownlee, Burnett; Dr.

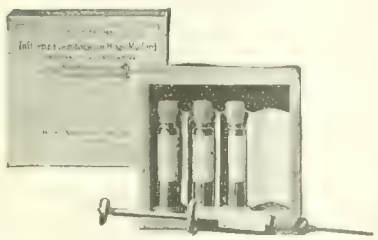
(Continued on page 38)

MULFORD
FOR THE CONSERVATION OF LIFE
LABORATORIES

"An Ounce of Prevention Is Worth a Pound of Cure"

Immunize your patients against Influenza and "Colds" NOW. **Do not wait** until respiratory affections are prevalent.

Influenza Serobacterin Mixed Mulford will give immunity from "Colds" and Influenza to a large percentage of patients infected by the organisms used in preparing the Serobacterin.



Supplied in packages containing four aseptic glass syringes as follows:

	A	B	C	D
B. influenzæ	125	250	500	1000 mil
Staphylococcus albus	125	250	500	1000 mil
Staphylococcus aureus	125	250	500	1000 mil
Streptococcus	125	250	500	1000 mil
Pneumococcus	125	250	500	1000 mil
M. catarrhalis (group)	125	250	500	1000 mil.

Mulford Typho-Serobacterin

For Immunization and Treatment of Typhoid Fever

The value of immunizing against typhoid fever is established. The results secured by the Armies and Navies of all Nations now at war absolutely prove its efficiency. Supplied in packages of three aseptic glass syringes, graduated as follows:

	1st Dose	2nd Dose	3rd Dose
Bacillus typhosus	1[illegible]0	2000	2000 million
B. paratyphosus "A"	[illegible]00	1000	1000 million
B. paratyphosus "B"	500	1000	1000 million

Also supplied in 4-syringe therapeutic package and 5 c.c.

Typho-Serobacterin Mixed is coming into general favor for immunization as well as treatment. It affords immunity against the typhoid and the paratyphoid "A" and "B" bacilli present in about 10% of typhoid cases.

Literature describing method of treatment and dosage, together with special educational bulletins for distribution to your patients, sent on request.

H. K. MULFORD CO., Philadelphia, U. S. A.

Manufacturing and Biological Chemists

(Continued from page 26)

R. E. Bledsoe, Taylor; C. M. Kent, Kennedy; Emmett Burton, Dallas; Dr. Robert A. Hasskarl, Houston; Dr. Stewart Cooper, Dallas; Dr. J. M. O'Farrell, Richmond; Dr. R. G. Anderson, Dawson; Dr. Forrest F. Fowler, Round Rock; Dr. R. E. Hearn, Mabank, Dr. E. Mack Parrish, Dallas; Dr. T. D. Vaughn and Dr. J. C. Thomas, Taylor; Dr. Davis Spangler and Dr. Wilber Carter, Sherman; Dr. Jos. S. Jones, Galveston; Dr. E. F. McCall, Abilene; Dr. W. T. Dawe, Gonzales; Drs. T. H. Harrell, G. Graham, J. A. Maness, J. C. Smith and Theo. Dorsett, Gonzales.

Deaths

Dr. D. M. Taylor, Garrison, aged 40, died August 3 after an operation of appendicitis.

Dr. A. M. Curtis, Waco, died August 10.

Dr. Harvin C. Moore, Houston, aged 42, died August 7.

Dr. Robert C. Andrews, Floydada, aged 84, died August 13.

Dr. A. M. Curtis, Waco, aged 65, died August 10.

VIRGINIA

Dr. W. B. Blanton, Richmond, Captain, M. R. C., has been ordered to Battle Creek, Mich., for duty in the cantonment laboratory.

Dr. J. C. Dunford, Portsmouth, Lieut., M. R. C., has been ordered to Camp Lee, Petersburg, Va., for duty.

Dr. B. L. Crawford, Richmond, Lieut., M. R. C., has been ordered to Petersburg, Va., for duty in the cantonment laboratory.

Dr. C. H. Lewis, Richmond, Lieut., M. R. C., has been ordered to Richmond, Va.

Dr. W. L. Peple, Richmond, Lieut., M. R. C., has been ordered to Camp Lee, Petersburg, Va., for duty as chief of the surgical service.

Dr. H. J. Hayes, Richmond, Lieut., M. R. C., has been ordered to Fort Riley, Kan.

Dr. J. B. Halligan, Petersburg, Lieut., M. R. C., has been ordered to Fort Sill, Okla., for a course of instruction in gas defense.

Dr. C. M. Thomas, Healing Springs, Lieut., M. R. C., has been ordered to Sunbury, Pa., Twenty-eighth Division, V. N. G., for duty with First Engineers.

Drs. B. R. Caldwell, Newcastle, and B. B. Dutton, Winchester, Lieuts., M. R. C., have been ordered to Syracuse, N. Y., for regimental duty.

The Medical Society of Virginia will hold its annual meeting in Roanoke October 23 to 26.

Dr. John W. Carroll, Lynchburg, has been elected President of the Virginia Golf Association.

Dr. Samuel H. Crocker, Stantonsburg, has been elected Vice-President of the North Carolina Farmers' Convention.

The City Board of Health of Harrisonburg has appropriated $1,000 to fight infantile paralysis, and adopted regulations making each individual responsible for the sanitary conditions of his premises.

Dr. W. B. Sagar, Danville, has been appointed on the exemption board in place of Dr. W. E. Jennings, resigned.

Dr. Wm. B. Pettit, New Canton, expects to sail shortly for England as a physician on a munition ship.

Dr. Junius F. Lynch, Norfolk, Surgeon General State National Guard, has been appointed Assistant Surgeon with rank as Lieut. Colonel and ordered to Camp McClellan, Anniston, Ala., for active duty.

Dr. John R. Bagby, Hickory, is recovering after a serious operation.

Dr. Jos. A. White, Richmond, will be in general charge of the organization of an aviation examining unit for the men to be sent to the station to be located in Richmond.

Dr. K. D. Graves, Richmond, city bacteriologist, has been commissioned in the M. R. C., and ordered to Rockefeller Institute, New York, for instruction under Dr. Simon Flexner.

Dr. Carroll H. Fowlkes, Richmond, was married to Miss Anne Sinton Beattie, also of Richmond, early in September.

Dr. Francis Page Nelson, Covesville, was married to Miss Ruth Lee Wailand, Crozet, the latter part of August.

The United States Public Health Service has established a national quarantine station on Crainey Island, [illegible] the Elizabeth River from Norfolk.

The Medical College of Virginia Base Hospital Unit No. 45 has been announced: Dr. Stuart McGuire, director; Dr. James H. Smith, adjutant; Dr. Greer Baughman, registrar; Dr. W. Lowndes Peple, assistant director and chief of sugical staff; Drs. Roy C. Fravel, Jos. F. Geisinger, A. L. Herring, Carrington Williams, H. P. Mauck, Richmond, and Frank C. Pratt, Fredericksburg, surgeons; Dr. J. Garnet Nelson, assistant director and chief of medical staff; Drs. Wm. B. Porter, J. T. McKinney, B. B. Dutton, J. E. Warinner, staff physicians; Dr. E. G. Hopkins, assistant director and chief of laboratory; Dr. W. B. Hopkins, diseases of eye, ear, nose and throat; Dr. Paul V. Anderson, neurologist; Dr. Charles Philips, bacteriologist and pathologist; Dr. Frederick M. Hodges Roentgenologist; Drs. P. J. M. Hughes and J. D. Williams, dentists.

Dr. E. L. Kendig, Victoria, was recently unanimously re-elected chairman of the Democratic committee of Lunenburg County.

Dr. Bertha D. Berger, Staunton, has been elected first assistant physician in charge of the female department of the Western State Hospital. She succeeds Dr. James H. Garlick, who retired because of a stroke of apoplexy during the summer.

Among those who have answered the call for service in the Medical Reserve Corps may be mentioned Drs. Earnest Muse, Roanoke; R. A. Davis, Newport News; C. B. Crute, Farmville; R. B. Shackelford, The Plains; Geo. A. Noland, Ashburn; Wm. E. Knewstep and Wm. A. Howard, Hampton; Benj. B. Dutton, Winchester; Edward B. Noland, Rectortown; Minor C. Lile, University; George H. Musgrave, Boykins; R. L. Williams and Geo. A. Renn, Norfolk; Bernard Barrow, Barrows Store; Howard Fletcher, Fairfax; S. T. Elliott, Danville; U. F. Bass, Fredericksburg; Otis T. Amory, Newport News; Jas. S. Burger, Hopewell.

Deaths

Dr. Jesse Barr Webb, Lodi, aged 39, died suddenly August 7.

Dr. John S. Pendleton, Scottsville, aged 78, died recently in Richmond.

WEST VIRGINIA

Dr. H. W. Daniels, Elkins, Lieut., M. R. C., has been ordered to Syracuse, N. Y., for regimental duty.

Dr. R. L. Eltinge, Sterling, Lieut., M. R. C., has been ordered to Syracuse, N. Y., for regimental duty.

Dr. Edward C. McClees has been appointed one of the internes at Sheltering Arms Hospital, Hansford, W. Va.

The Little Kanawha and Ohio Valley Medical Society held a meeting September 4 at Parkersburg.

The fall session of the Eastern Panhandle Medical Society was held September 12 at Hill Top House, Harper's Ferry.

The West Virginia Medical Society will hold its annual meeting October 2, 3 and 4 at Fairmont.

Dr. James F. Van Pelt, Huntington, was married recently to Miss Woodie Breeden, also of Huntington.

Dr. S. L. Jepson, State Commissioner of Health, reports that since the cooler nights infantile paralysis is on the decrease in the state.

A typhoid fever outbreak has been reported to the State Department of Health from Princeton.

Dr. H. D. Hatfield, Huntington, and Dr. W. C. Slusher, Bluefield, in making a tour of the state addressed physicians of the northern Panhandle section in an effort to get more physicians to enter the service.

Among those who have answered the call for service in the Medical Reserve Corps may be mentioned Drs. O. D. Barker, Parkersburg; Hartman Kable, Martinsburg; C. B. Clay, Martinsburg; H. D. Hatfield, Huntington; J. O. Hicks, Huntington; Roy Kessel, Ripley; Geo. Fordham, Affinity; William Neill, Jr., Charlestown, and Thos. T. McNeer, Dante.

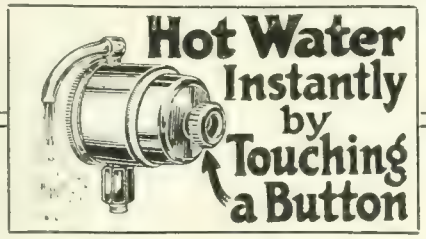
Dr. M. B. Williams, Wheeling, is the new City Health Commissioner.

Deaths

Dr. Alison B. Bush, Weston, aged 51, died recently.

Dr. Harry V. Sanns, LeSage, aged 58, died recently at Rochester, Minn.

Get Your Hot Water Instantly, as You Get Your Light



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HIGH POWER
Electric Centrifuges
Send for Cat. Cn.
INTERNATIONAL EQUIPMENT CO.
532 WESTERN AVE. BOSTON, MASS.

THE STORM BINDER AND ABDOMINAL SUPPORTER
(Patented)

No Leather, No Whalebones, No Rubber Elastics. Washable as Underwear
ADAPTED TO USE OF MEN, WOMEN, CHILDREN AND BABIES
For Hernia, Relaxed Sacroiliac Articulations, Floating Kidney, Low and High Operations, Ptosis Pregnancy, Pertussis, Obesity, Etc.
Send for new folder and testimonials of physicians. General mail orders filled at Philadelphia only—within twenty-four hours
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Look for the RED HEART on the bottle label—no RED HEART, it's not Stafford

STAFFORD WATER

The BO-GA-HA-MA (Water of Life) of the Indians

DIURETIC
DILUENT
APERIENT
HEMATIC

Dr. Henry Froehling, of Froehling & Robertson, Chemists, Richmond, Va., on October 30, 1914, collected in person water from Stafford Springs from which to make an exhaustive test. A complete report has just been made on the water—a report that justifies all the claims made of Stafford Water by its many friends.

Dr. Froehling in his report comments as follows:

"It has been shown that Radio Emmanations are very effective in Gout, Rheumatism, Sclerosis of the Arteries, and that the use of Radio Active water either by drinking or bathing, have a strong tendency to increase the activity of the kidneys and bladder. This has perhaps been no uncertain factor in producing the many cures of Nephritis and other kidney troubles credited to the Stafford Mineral Water.

Stafford shipped in any quantity—handled by all druggists
We have excellent hotel accommodations at reasonable rates

STAFFORD MINERAL SPRINGS AND HOTEL CO., LTD.
Operated by COLBURN, MORGAN COMPANY
VOSSBURG, MISS.

Look for the RED HEART for genuine Stafford Water Write for booklet and analysis

PLACEBOES

CAUGHT A TARTAR

The lawyer was endeavoring to pump some free advice out of the doctor.

"Which side is the best to lie on, Doc?"

"The side that pays you the retainer."—*Cincinnati Enquirer.*

TAKING CHANCES

Pigskin Percy, the jockey, was taken ill and a friend gave him the address of a doctor.

Percy came back shortly after and remarked:

"I've got some medicine, but I'm blowed if I went to that doctor of yours."

"Why?" asked his friend, surprised.

"Well," replied Percy, "I was just about to go in when I saw on the door plate, 'Dr. Jones,' and below it 'Ten to one.' When I saw that I said to myself, I'll be hanged if I take any such risks as that, so I went around the corner and saw another plate with the inscription, 'Dr. James,' and below, 'Three to five.' The odds were shorter so I went to him."—*Austin American.*

TOO SUGGESTIVE

The new patient had been put to bed by the nurse. Upon waking he inquired:

"Phwhat did ye say the doctor's name was?"

"Doctor Kilpatrick," was the reply.

"Thot settles it," replied the sick man. "Thot doctor will not get a chance to operate on me!"

"Why not?" asked the nurse. "He is a good doctor."

"Maybe so, but not for me—you see my name is Patrick."—*Exchange.*

CLASSIFIED ADVERTISEMENTS

FOR SALE—Osler System of Medicine, seven volumes, 1910, $42.00, for $15.00 F. O. B. Chicago. Ask for our bargain catalogue of 2000 medical books. Login Brothers, 1816 W. Harrison St., Chicago, Ill.

SPECIAL OFFER WHILE THEY LAST

We are offering 25 of these famous combination bag and medicine case, made of genuine cowhide leather, steel frame, with brass locks, full leather lined. It contains 4 1½ oz. metal cap bottles, and 24 6 dram vials, all on removable tray and all on one side of bag. The other side is entirely empty for instruments and sundries. It is fitted with loops to hold instruments and large pocket.

The bag is 17 inches long, 6 inches wide and 6 inches high. **Your check for $10.50 brings it to any part of U.S.A. (Express Prepaid).**

Your money cheerfully refunded if not entirely satisfied.

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1861 Ogden Avenue Established 1904 Chicago, Ill.

Dakin Solution made according to the formulae used by Dr. Alexis Carrel at Hospital Militaire, No. 21 Compeigne, France, in one-gallon jugs 85c, five gallon jugs $4.00.

See article by Dr. Lloyd Noland, Southern Medical Journal, December 1916, Page 1056
Reprint of article, and descriptive circular of apparatus mailed on request

WE WILL ACCEPT ORDERS AT ABOVE PRICES
TO BE SHIPPED THROUGH YOUR DRUGGIST

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Surgical Instruments, Hospital Supplies and Manufacturing Chemists

BIRMINGHAM ALABAMA

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Give it agreeably by prescribing for your patient?

KALAK WATER

Over seven grams of available alkali in each bottle and yet perfectly palatable.

The strongest alkaline water known.

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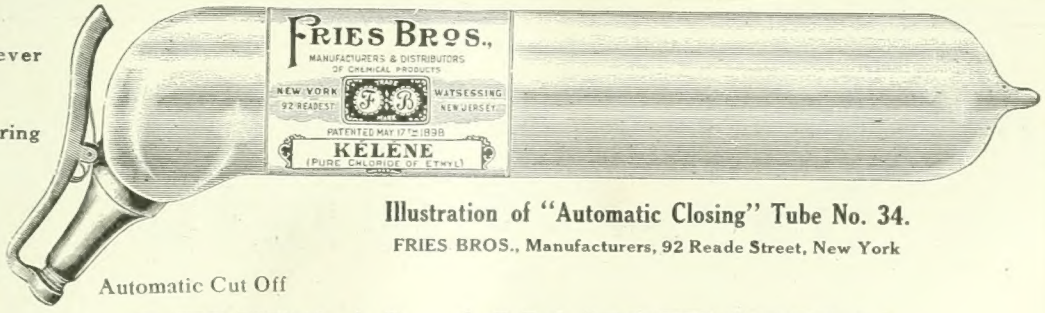

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GENERAL ANAESTHESIA

With "Graduated Kelene" also as a preliminary to Ether

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GLASS AUTOMATIC SPRAYING TUBES

does the work quickly, pleasantly and thoroughly

NO STEAM VALVE IS REQUIRED

Simply press the lever and the Automatic Sprayer does the rest

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J. FRED SAYERS,
Managing Director.

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1. All claims or suits for alleged civil malpractice, error or mistake, for which our contract holder,
2. Or his estate is sued, whether the act or omission was his own,
3. Or that of any other person (not necessarily an assistant or agent),
4. All such claims arising in suits involving the collection of professional fees,
5. All claims arising in autopsies, inquests and in the prescribing and handling of drugs and medicines.
6. Defense through the court of last resort and until all legal remedies are exhausted
7. Without limit as to amount expended.
8. You have a voice in the selection of local counsel.
9. If we lose, we pay to amount specified in addition to the unlimited defense.
10. The only contract containing all the above features and which is protection per se.

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Special INFANT FEEDING

Malnutrition-Marasmus-Atrophy

MELLIN'S FOOD
4 level tablespoonfuls
SKIMMED MILK
8 fluidounces
WATER
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Analysis:

Fat	.49
Protein	2.28
Carbohydrates	6.59
Salts	.58
Water	90.06
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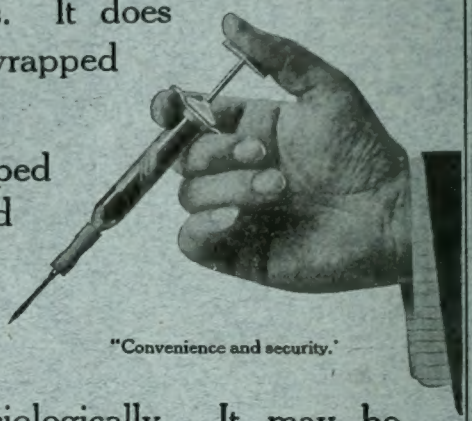
OUR diphtheria antitoxin is PROVED antitoxin. The proof begins with the first step in the process of manufacture—the selection of healthy, vigorous horses. It does not end until the finished product is wrapped and labeled.



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